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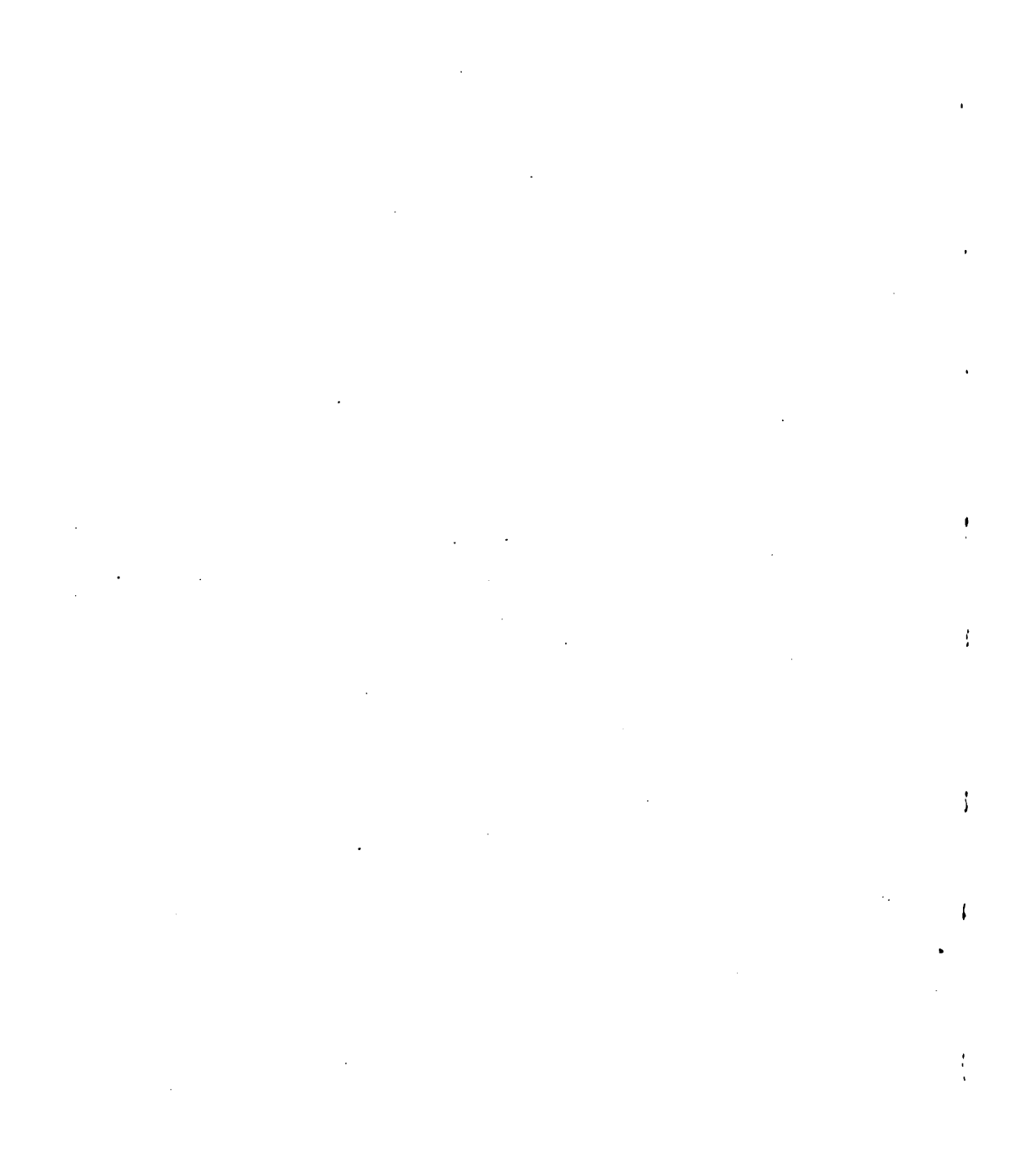
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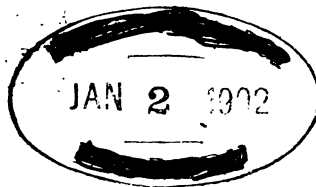
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PREFACE

I began collecting these portraits some twenty years ago, and since then have searched most of the print-shops in the principal cities of this country and of Europe, and examined most of the catalogues of dealers and of auction-sales. Such a collection can never be complete, and this lacks some important names; for instance I have been unable to find authentic portraits of Alcuin, of Ratich, and of Mulcaster. But most of the great names are here, and it is likely to be some time before a more comprehensive collection of the kind is published. For many of the portraits of mathematicians I am under obligation to Prof. Daniel Eugene Smith, of the Teachers college, who put his fine collection at my disposal.

Where duplicate portraits are given they are usually successive, as of Bancroft (page 158) and of Henry Barnard (page 190); or confirmatory as of Francke (page 69), of Humboldt (page 110), and of Froebel (pages 122 and 123). In the case of Pestalozzi I have given, besides the usual portrait (page 95, to the right) and a more conventional portrait (page 94), the squalid portrait from Biber's life (page 95); though William Woodbridge says in the *Annals of Education* (i.597): "We regret that the portrait should present us with the mere remains of Pestalozzi. We are so fortunate to possess a better one, whose correctness we have known from personal intercourse with this amiable man."

In the case of living persons it has of course been difficult to make selection. No one will look over the list without detecting what seem to him omissions. But it was necessary to fix some limit, and I have given those whose work seemed especially important and typical, and whose names are frequent in the news of the day.

The form of sketches was adopted for use in the Teachers Calendar, published for several years past as a supplement to the School Bulletin, and giving each month portraits and sketches of six educators whose birthdays come during the month. The sketches are brief, but will be found to contain a good many facts, and an abundance of dates, which form the anatomy of biography.

A first attempt at a compilation of this kind must necessarily show crudeness and incompleteness, and it is one of the expectations of the compiler that the work he has done here will some time help another man to make a better book.

SYRACUSE, March 21, 1901

CHRONOLOGICAL INDEX

<i>Date of Birth</i> B. C.	PAGE	<i>Date of Birth</i> A. D.	PAGE
1000? Zoroaster.....	17	1473 Copernicus.....	36
640 Thales.....	18	1483 Martin Luther.....	37
620? Æsop.....	18	1490? Rabelais.....	38
582 Pythagoras.....	19	1491 Loyola.....	39
550 Confucius.....	20	1492 Vives.....	40
540? Aristides.....	21	Agricola.....	41
470 Socrates.....	22	1497 Melanchthon.....	41
460 Hippocrates.....	21	1499 Thomas Platter.....	42
436 Isocrates.....	22	1501 Cardano.....	43
429 Plato.....	23	1505 John Knox.....	44
384 Demosthenes.....	24	1506 St. Francis Xavier.....	46
Aristotle.....	25	1507 Sturm.....	45
342 Epicurus.....	26	1509 Calvin.....	46
Zeno.....	26	1515 Ascham.....	47
300 Euclid.....	27	1533 Montaigne.....	48
287 Archimedes.....	27	1540 Ludolf von Ceulen.....	49
106 Cicero.....	28	1543 Aquaviva.....	49
98 Lucretius.....	29	1546 Tycho Brahe.....	50
3 Seneca.....	30	1550 John Napier.....	51
A. D.		1560 Arminius.....	51
121 Marcus Aurelius.....	30	1561 Bacon.....	52
130 Galen.....	31	1564 Galileo.....	53
742 Charlemagne.....	32	1571 Kepler.....	53
? Leonardo of Pisa.....	33	1576 St. Vincent de Paul.....	54
1225 St. Thos. Aquinas.....	33	1578 William Harvey.....	55
1320 Wyclif.....	34	1585 Jansen.....	56
1466 Colet.....	34	1589 Bignon.....	56
1467 Erasmus.....	35	1592 Comenius.....	57

<i>Date of Birth</i>	<i>PAGE</i>	<i>Date of Birth</i>	<i>PAGE</i>
1596	Descartes.....58	1715	Gellert.....82
1601	Fermat.....58	1722	Witherspoon.....82
1608	Milton.....59	1723	Basedow.....83
1612	Arnauld.....60		Adam Smith.....84
1623	Pascal.....60		Kant.....84
1626	Mme de Sevigné....61	1727	Wm. Sam'l Johnson.85
1627	Bossuet.....61		Ezra Stiles.....85
1632	Locke.....62	1733	Priestley.....86
	Spinoza.....63	1736	Lagrange.....86
1642	Newton.....64	1737	Myles Cooper.....87
1646	Leibnitz.....65	1738	James Manning....87
1651	Fenelon.....66		Wm. Herschel.....88
	St. De La Salle....67	1740	Oberlin.....89
1661	Rollin.....68	1741	Mrs. Trimmer.....88
1663	Francke.....69		Samuel Kirkland...89
1667	Bernouilli.....70		Lavater.....90
1669	Christian Wolff....71	1743	Jefferson.....90
1682	Nicho's Saunderson.71		Lavoisier.....91
1685	Bishop Berkeley....72		Condorcet.....91
1696	Sam'l Johnson.....72		Dalzell.....92
	Lord Kames.....73	1744	R. Edgeworth.....92
1698	Colin Maclaren....73	1745	Hannah More.....93
1703	Jonathan Edwards.74		Lindley Murray....93
1706	Benj. Franklin.....75	1746	Pestalozzi.....94
1707	Linnaeus.....76		Monge.....96
	Euler.....76		Mme. de Genlis....96
1710?	Dilworth.....77		Campe.....98
1710	John Lovell.....77	1749	Laplace.....97
1711	Hume.....78	1750	Girard.....99
	Eleazar Wheelock...78	1752	Legendre.....97
1712	Rousseau.....79		Timothy Dwight...99
	de l'Epée.....80	1753	Andrew Bell.....100
1713	Clairaut.....80	1754	Niemeyer.....101
1714	d'Alembert.....81	1758	de Sacy.....102

CHRONOLOGICAL INDEX

3

<i>Date of Birth</i>	<i>PAGE</i>	<i>Date of Birth</i>	<i>PAGE</i>
1759	Porson.....102	1786	Verplanck.....127
1762	Fichte.....103		Greenleaf.....127
1763	Jean Paul Richter.103	1787	Gallaudet.....128
	James Kent.....104		Jesse Torrey, jr....129
1764	S. Van Rensselaer.105		Emma Willard....129
1767	Maria Edgeworth...106	1788	Abig'l Hasseltine..130
	J. Quincy Adams..107		Sir Wm. Hamilton.131
1768	James Wadsworth.107		George Combe.....131
1769	E. D. Clarke.....108		Schopenhauer.....132
	Tobler.....108	1789	Mrs. A. H. Judson.130
	Cuvier.....109		Cauchy.....132
	A. von Humboldt.110		John Farmer.....133
	De Witt Clinton...111	1790	Cyrus Peirce.....133
1770	Henry Davis.....111		A. C. Flagg.....134
	Jacotot.....112		Diesterweg.....135
1771	Fellenberg.....113	1791	Denison Olmsted..134
1772	Ebenezer Porter...114		Faraday.....135
1773	Eliphalet Nott....114		S. F. B. Morse.....136
1774	John Griscom.....115		Peter Cooper.....136
	Jeremiah Day.....115		Beck.....137
	Edward Baines....116	1792	Cousin.....138
1776	George Birkbeck...116		Frère Philippe....138
	Herbart117		Wilbur Fisk.....139
	Spurzheim.....118		Lowell Mason.....139
1778	Davy.....118		Thaddeus Stevens.140
	Lancaster.....119		Mrs. Phelps.....140
	Schimmelpennick.120	1793	Warren Colburn...141
1779	Brougham.....120		Gideon F. Thayer.141
1780	Audubon.....121		David Stow.....142
1782	Froebel.....122	1794	Edward Everett...143
1783	von Raumer.....124		W. R. Johnson....143
1785	Gideon Hawley...125		Elias Cornelius...144
1786	Arago.....126		H. P. Peet.....144
	Nathan Guilford...126		James G. Carter...145

<i>Date of Birth</i>	<i>PAGE</i>	<i>Date of Birth</i>	<i>PAGE</i>
1795	Ebenezer Bailey...146	1802	Calvin E. Stowe...164
	Wm. B. Fowle.....146		Hugh Miller.....165
	George Peabody...147		Thomas Guthrie...165
	Whewell.....148		Mark Hopkins.....166
	Sir Rowland Hill..148	1803	E. Ryerson.....167
	Thomas Arnold....149		Jacob Abbott.....168
	James Harper.....149		E. Leavenworth...168
1796	Horace Mann.....150		Frederic Hill.....169
	Francis Wayland..151		Richard Owen.....169
1797	Lyell.....151	1804	E. P. Peabody....170
	Mary Lyon.....152		Tillinghast.....170
	Geo. B. Emerson...152		Dillaway.....171
	Samuel J. May.....153	1805	Rob't Rantoul, jr. 171
	Charles Anthon...153		H. P. Tappan.....172
	D. D. Barnard....154		Th. Burrowes.....172
1798	Gen. Dix.....154		F. D. Maurice.....173
	Duhamel.....155		G. A. Denison.....173
	Michelet.....155	1806	DeMorgan.174
	Wm. Russell.....156		J. S. Mill.....175
	Charles Davies....156		E. C. Wines.....176
	Wm. A. Alcott.....157		J. P. Fairbanks...176
1799	A. B. Alcott.....157	1807	Ezra Cornell.....177
	Samuel Lewis... .158		Joseph Alden.....177
1800	Geo. Bancroft.....158		S. H. Taylor.....178
	E. C. Benedict....159		Mary Carpenter...179
	S. B. Woolworth...159		Joseph Payne.....179
	Wm. Ellis.....160		Agassiz.....180
	Alonzo Potter.....160		Guyot.....180
1801	Marshall Conant...161	1808	Schreber.....181
	T. D. Woolsey.....161		Francis Dwight...182
	John Kingsbury...162	1809	S. S. Randall.....183
	S. G. Howe.....162		F. A. P. Barnard..184
1802	Simeon North.....163		Blackie.....185
	Tayler Lewis.....163		Darwin.....186

CHRONOLOGICAL INDEX

5

<i>Date of Birth</i>	<i>PAGE</i>	<i>Date of Birth</i>	<i>PAGE</i>
1810	D. P. Page.....187	1819	John Ruskin.....209
	J. S. Hart.....188		Chas. Kingsley....210
	Samuel Clark.....188		John Tyndall.....210
	Asa Gray189	1820	Herbert Spencer...211
1811	Henry Barnard...190		Charles T. Pooler...212
	Sarmiento.....192		Edward North.....212
	James McCosh.....193		H. B. Wilbur.....213
	J. W. Draper.....193	1821	S. G. Love.....213
	J. V. S. L. Pruyn...194		Edward Thring...214
	Elias Loomis.....194	1822	Theo. W. Dwight...215
	W. R. Grove.....195		N. A. Calkins.....215
1812	Seguin.....196		A. R. Wallace.....216
	C. H. Anthony....196		Matthew Arnold...216
	J. W. Armstrong...197		Benn Pitman.....217
	Jas. N. McElligott.197		Dana P. Colburn...217
1813	James D. Dana....198	1823	E. A. Freeman.....218
	Marcus Willson...198		Max-Müller.....218
	Wm. B. Carpenter.199		Jonathan Allen....219
	Isaac Pitman.....199		A. J. Upson.....219
1814	Miss Shirreff.....200		E. A. Sheldon.....220
	J. J. Sylvester.....200		James Johonnot...221
1815	M. B. Anderson...201	1824	John H. French....221
	Myrtilla Miner....201		Geo. L. Farnham...222
1816	A. D. Lord.....202		A. J. Rickoff.....222
	Mary Mortimer....203		G. W. Curtis.....223
1817	Noah T. Clarke...203		J. G. Fitch.....224
	Benjamin Jowett...204	1825	Huxley.....224
1818	Alexander Bain...205		Wickersham.....225
	Henry Drisler.....206	1827	S. G. Williams....225
	Maria Mitchell....206		Joseph Baldwin...226
	Victor M. Rice....207		A. G. Gaines.....226
1819	Ebenezer Dodge...208		A. G. Boyden.....227
	F. D. Huntington.208		Edward Atkinson.227
	Wm. E. Forster....209		Emily Howland...228

<i>Date of Birth</i>	<i>PAGE</i>	<i>Date of Birth</i>	<i>PAGE</i>
1828	C. W. Bennett.....229	1838	John Morley.....251
	Wm. Hutchison....229	1839	Kotelmann.....252
1829	J. B. Angell.....230		Frances Willard...253
	M. MacVicar.....230		M. Cooper-Poucher 253
	S. S. Laurie.....231		Aaron Gove.....254
	D'A.W. Thompson 231	1840	Thomas Davidson.254
	Laura Bridgman..232	1841	George W. Ross...255
	E. E. White.....232		T. W. Preyer.....256
1830	David Murray.....233		Geo. H. Martin...257
1831	F. W. Farrar.....234	1842	John Fiske.....257
	R. H. Quick.....234		T. J. Backus.....258
	O. C. Marsh.....235		J. G. Wight.....258
	Archbishop Ryan.235	1843	Irwin Shepard.....259
	J. A. Garfield.....236		Compayré.....260
1832	A. D. White.....236	1844	E. B. Andrews.....261
	Mrs. Pollock.....237		C. R. Skinner.....261
	Thomas Egleston..238	1846	Isaac H. Stout....262
	Newell.....239		Sherm'n Williams.262
1834	C. W. Eliot.....240		H. H. Straight....263
1835	Wm. T. Harris.....241	1847	William Rein.....264
	Simon Newcomb...242		Brother Azarias...265
	Geo. F. Barker....242	1848	A. S. Draper.....266
	Orlan'o Blackman.243	1850	Seth Low.....267
	E. V. DeGraff.....243		Melvil Dewey.....267
1836	Wm. H. Payne....244	1851	M. W. Stryker.....268
	B. A. Hinsdale....244	1852	Wm. H. Mace.....268
	Mrs. Kraus-Boelte.245		Wm. H. Maxwell..269
	A. P. Marble.....245		Thos. M. Balliet...269
	J. D. Steele.....246	1854	J. G. Schurman...270
1837	George Ebers.....247	1855	C. B. Gilbert.....271
	Col. Parker.....248	1856	A. S. Downing....271
	H. R. Sanford.....249	1857	Albert Leonard...272
1838	A. B. Watkins.....249	1858	De Witt Hyde...272
	E. S. Morse.....250	1862	N. M. Butler.....273

CLASSIFIED INDEX

	PAGE
Organizers and Reformers	
Aquaviva.....	49
Arminius.....	51
Ascham.....	47
Basedow.....	83
Bell.....	100
Calvin.....	46
Campe.....	98
Charlemagne.....	32
Clinton.....	111
Comenius.....	57
Cousin.....	136
M. Edgeworth.....	106
R. Edgeworth.....	92
Erasmus.....	35
Fellenberg.....	113
Froebel.....	122
Herbart.....	117
Jacotot.....	112
Jefferson.....	90
Knox.....	44
Lancaster.....	119
Locke.....	62
Loyola.....	39
Luther.....	37
Melanchthon.....	41
Milton.....	59
Montaigne.....	48
Niemeyer.....	101

	PAGE
Organizers and Reformers	
Pestalozzi.....	94
Porter.....	160
Rabelais.....	38
Richter.....	103
Rollin.....	68
Sturm.....	45
Tobler.....	108
Vincent de Paul.....	54
Vives.....	40
Wyclif.....	34
Univer'y of the State of N. Y.	
Chancellor Benedict.....	159
Curtis.....	223
Pruyn.....	194
Upton.....	219
Vice-Chan. Verplanck.....	127
Secretary Beck.....	137
Clinton.....	111
Dewey.....	267
Hawley.....	125
Murray.....	233
Watkins.....	249
Woolworth.....	159
College Presidents	
Alfred, Allen.....	219
Bowdoin, Hyde.....	272
Brown, Andrews.....	261
Fisk.....	139

PAGE	PAGE
College Presidents	
<i>Brown, Manning</i>	87
<i>Wayland</i>	151
<i>Colgate, Dodge</i>	208
<i>Columbia, Barnard</i>	184
<i>Cooper</i>	87
<i>S. Johnson</i>	72
<i>W. S. Johnson</i>	85
<i>Low</i>	267
<i>Cornell, Schurman</i>	270
<i>White</i>	236
<i>Dartmouth, Wheelock</i> ..	78
<i>Hamilton, Davis</i>	111
<i>North</i>	163
<i>Stryker</i>	268
<i>Harvard, Eliot</i>	240
<i>Everett</i>	143
<i>Jefferson, Alden</i>	177
<i>Michigan, Angell</i>	230
<i>Tappan</i>	172
<i>Middlebury, Davis</i>	111
<i>Princeton, Edwards</i>	74
<i>McCosh</i>	193
<i>Witherspoon</i>	82
<i>Rochester, Anderson</i> ...	201
<i>St. Lawrence, Gaines</i> ...	226
<i>Union, Nott</i>	114
<i>Williams, Hopkins</i>	166
<i>Yale, Day</i>	115
<i>Dwight</i>	99
<i>Stiles</i>	85
<i>Woolsey</i>	161
Masters of Private Schools	
<i>Rugby, Arnold</i>	149
Masters of Private Schools	
<i>St. Paul's, Colet</i>	34
<i>Uppingham, Thring</i> ...	214
<i>Andover, Taylor</i>	178
<i>Boston Latin, Dillaway</i> ..	171
<i>Lovell</i>	77
<i>Canandaigua, Clarke</i> ...	203
<i>Round Hill, Bancroft</i> ...	158
State Superintendents	
<i>U. S., Barnard</i>	190
<i>Harris</i>	241
<i>Conn., Barnard</i>	190
<i>Md., Newell</i>	239
<i>Mass., Mann</i>	150
<i>N. Y., Dix</i>	154
<i>Draper</i>	266
<i>Flagg</i>	134
<i>Hawley</i>	125
<i>Leavenworth</i>	168
<i>Rice</i>	207
<i>Skinner</i>	261
<i>O., Lewis</i>	158
<i>Pa., Burrowes</i>	172
<i>Wickersham</i>	225
<i>R. I., Barnard</i>	190
<i>Vt., French</i>	221
City Superintendents	
<i>Ontario, Ross</i>	255
<i>Ryerson</i>	167
<i>Inspectors, Eng., Arnold</i> ..	216
<i>Fitch</i>	224
City Superintendents	
<i>Binghamton, Farnham</i> ...	222
<i>Boston, Martin</i>	257

	PAGE
City Superintendents	
<i>Cincinnati</i> , Guilford.....	126
White.....	232
<i>Cleveland</i> , Draper.....	266
Hinsdale.....	244
Rickoff.....	222
<i>Denver</i> , Gove.....	254
<i>Jamestown</i> , Love.....	213
<i>New York</i> , Calkins.....	215
Marble.....	245
Maxwell.....	269
Randall.....	183
<i>Quincy</i> , Parker.....	248
<i>Rochester</i> , Gilbert.....	271
<i>Springfield</i> , Balliet.....	269
<i>Syracuse</i> , Farnham.....	222
Sheldon.....	220
Normal Instructors	
Alden.....	177
Armstrong.....	197
Baldwin.....	226
Boyden.....	227
Carter.....	145
Clark.....	188
Conant.....	161
Cooper-Poucher.....	253
Denison.....	173
Farnham.....	222
Hinsdale.....	244
Johnson.....	143
Laurie.....	231
Leonard.....	272
MacVicar.....	230
Martin.....	257

	PAGE
Normal Instructors	
May.....	153
Page.....	187
Parker.....	248
J. Payne.....	179
W. H. Payne.....	244
Peirce.....	133
Rein.....	264
Sheldon.....	220
Shepard.....	259
Straight.....	263
Tillinghast.....	170
S. G. Williams.....	225
Woolworth.....	159
Institute Instructors	
DeGraff.....	243
Downing.....	271
French.....	221
Johonnot.....	221
Pooler.....	212
Sanford.....	249
Stout.....	262
White.....	232
Educational Historians	
Compayré.....	260
Davidson.....	254
Hinsdale.....	244
Niemeyer.....	101
Platter.....	42
Quick.....	234
Randall.....	183
Schimmelpennick.....	120
von Raumer.....	125
Wickersham.....	225

	PAGE		PAGE
Educational Historians		Founders and Benefactors	
S. G. Williams.....	225	G. Peabody.....	147
Editors		Van Rensselaer.....	105
W. A. Alcott.....	157	Wadsworth.....	107
Barnard.....	190	Wheelock.....	78
Butler.....	273	Educational Legislators	
Cornelius.....	144	D. Barnard.....	154
Diesterweg.....	135	Brougham.....	120
Dwight.....	182	Charlemagne.....	32
Farmer.....	133	Clinton.....	111
Fowle.....	146	Forster.....	209
Hart.....	188	Garfield.....	236
Lord.....	202	Jefferson.....	90
McElligott.....	197	Morley.....	251
Mann.....	150	Rantoul.....	171
Newell.....	239	Sarmiento.....	192
E. Peabody.....	170	Stevens.....	140
Russell.....	156	A. D. White.....	236
Thayer.....	141	Charitable and Reformatory	
E. E. White.....	232	Baines.....	116
Wickersham.....	225	Birkbeck.....	116
Founders and Benefactors		Bransiet.....	137
Anthony.....	196	Carpenter.....	180
Brougham.....	120	De La Salle.....	67
Colet.....	34	Ellis.....	160
P. Cooper.....	136	Francke.....	69
Cornell.....	177	Griscom.....	115
Egleston.....	238	Guthrie.....	165
Fairbanks.....	176	F. Hill.....	169
Francke.....	69	Kingsley.....	210
Franklin.....	75	Oberlin.....	89
Girard.....	99	Stow.....	142
Kirkland.....	89	Vincent de Paul.....	54
Maurice.....	173	Wines.....	176

	PAGE
Special Education—Negro	
Howland.....	228
May.....	153
Miner.....	201
Blind	
Bridgman.....	232
Howe.....	162
Lord.....	202
Saunderson.....	71
Deaf	
Bridgman.....	232
de l'Épée.....	80
Gallaudet.....	128
Peet.....	144
Feeble-minded	
Seguin.....	196
Wilbur.....	213
Missionaries	
Cornelius.....	144
Judson.....	130
Kirkland.....	89
Xavier.....	45
Adult Education	
Birkbeck.....	116
Brougham.....	120
Maurice.....	173
Torrey.....	128
Education of Women	
Abbott.....	168
Backus.....	258
Bailey.....	146
Emerson.....	152
Fenelon.....	66
Genlis.....	96

	PAGE
Education of Women	
Hasseltine.....	130
Kingsbury.....	162
Lyon.....	152
More.....	93
Mortimer.....	203
Phelps.....	140
Shirreff.....	200
Trimmer.....	88
Wight.....	258
E. Willard.....	128
F. Willard.....	253
Special Subjects	
<i>Arabic</i> , de Sacy.....	102
T. Lewis.....	163
<i>Art</i> , S. F. B. Morse.....	136
Ruskin.....	209
<i>Astronomy</i> , Bernouilli..	70
Cauchy.....	132
Copernicus.....	36
Galileo.....	53
Herschel.....	88
Kepler.....	53
Laplace.....	97
Loomis.....	194
Mitchell.....	206
Newcomb.....	242
Newton.....	64
Thales.....	18
Tycho Brahe.....	50
<i>Botany</i> , Gray.....	189
Linnaeus.....	76
<i>Chemistry</i> , Clarke.....	108
Davy.....	118

	PAGE
Special Subjects	
<i>Chemistry</i> , Faraday.....	135
Griscom.....	115
Lavoisier	91
<i>Discipline</i> , Abbott.....	168
A. B. Alcott.....	157
Bancroft.....	168
Emerson	152
F. Hill.....	169
R. Hill.....	148
Spencer.....	211
Wines.....	176
<i>Ethics</i> , Æsop.....	19
A. B. Alcott.....	159
Aristides	19
Aristotle.....	25
Confucius.....	19
Epicurus.....	26
Franklin	75
Huntington.....	208
Kames	73
Marcus Aurelius.....	30
Plato	23
Pythagoras.....	19
Seneca.....	30
Socrates.....	22
Spinoza.....	63
Zoroaster	17
<i>Geography</i> , Guyot.....	180
Humboldt	110
<i>Geology</i> , Clarke.....	108
Cuvier.....	109
Dana.....	198
Egleston.....	238

	PAGE
Special Subjects	
<i>Geology</i> , Humboldt.....	110
Lyell	151
Marsh.....	235
Miller.....	165
Owen.....	169
Whewell	148
<i>Greek</i> , Anthon.....	153
Blackie.....	185
Dalzell	92
Drisler	206
Hutchison	229
Jowett	204
Lewis	163
North.....	212
Porson.....	102
<i>History</i> , Azarias.....	265
Bennett.....	229
Ebers	247
Fiske.....	257
Freeman.....	218
Mace	268
Michelet.....	155
<i>Kindergarten</i> , Froebel..	122
Kraus-Boelte	245
Oberlin	89
Peabody.....	170
Pollock.....	237
<i>Language</i> , Max-Müller..	218
<i>Law</i> , Bignon.....	56
Dwight.....	215
Kent.....	104
<i>Mathematics</i> ,	
Archimedes.....	27

Special Subjects

PAGE

Mathematics

Bernouilli.....	70
Cardano.....	43
Cauchy.....	132
Ceulen.....	49
Clairaut.....	80
D. P. Colburn.....	217
W. Colburn.....	141
Condorcet.....	91
d'Alembert.....	81
Davies.....	156
DeMorgan.....	174
Dilworth.....	77
Duhamel.....	155
Euclid.....	27
Euler.....	76
Fermat.....	58
Greenleaf.....	127
Lagrange.....	86
Legendre.....	97
Leibnitz.....	65
Leonardo.....	33
Maclauren.....	73
Monge.....	96
Napier.....	51
Newcomb.....	242
Pascal.....	60
Pythagoras.....	19
Saunderson.....	71
Sylvester.....	200
Thales.....	18
Wolff.....	71
<i>Mechanics, Archimedes</i>	27

Special Subjects

PAGE

<i>Mechanics, Newton</i>	64
<i>Medicine, Cardano</i>	43
Galen.....	31
Harvey.....	55
Hippocrates.....	21
<i>Music, Blackman</i>	243
Mason.....	139
Pythagoras.....	19
<i>Oratory and Rhetoric</i>	
Adams.....	107
Cicero.....	28
Demosthenes.....	24
Everett.....	143
Hart.....	188
Socrates.....	22
Porter.....	114
Russell.....	156
Upton.....	219
<i>Philosophy, Aquinas</i> ...	33
Aristotle.....	25
Bacon.....	52
Bain.....	205
Berkeley.....	72
Cicero.....	28
Cousin.....	138
Descartes.....	58
Epicurus.....	26
Fichte.....	103
Gellert.....	82
Hamilton.....	131
Herbart.....	117
Hume.....	78
Kant.....	84

PAGE	PAGE
Special Subjects	Special Subjects
<i>Philosophy, Leibnitz</i> 65	<i>Physiology and Hygiene</i>
Locke..... 62	Kingsley.....210
Lucretius..... 29	Kotelmann.....252
Mill.....175	Preyer.....256
Plato..... 23	Schreber.....181
Pythagoras 19	<i>Political Economy</i>
Schopenhauer.....132	Atkinson.....227
Socrates..... 22	A. Smith..... 84
Spencer.....211	<i>Theology, Agricola</i> 41
Spinoza..... 63	Aquaviva..... 49
Thales..... 18	Aquinas..... 33
Wolff..... 71	Arminius..... 51
Zeno..... 26	Arnauld..... 60
Zoroaster..... 17	Bossuet..... 61
<i>Phonography</i>	Calvin..... 46
B. Pitman.....217	Confucius..... 20
I. Pitman.....199	Edwards 74
<i>Phrenology, Combe</i>131	Erasmus..... 35
Spurzheim.....118	Francke..... 69
<i>Physics, Bacon</i> 52	Harper.....149
Barker.....242	Jansen..... 56
Draper.....193	Knox..... 44
Franklin..... 75	Loyola..... 39
Grove.....195	Luther..... 37
Morse.....136	Pascal..... 60
Newton..... 64	C. E. Stowe.....164
Olmsted.....134	Wyclif..... 34
Priestley..... 86	Xavier..... 46
Tyndall.....210	Zoroaster..... 17
<i>Physiology and Hygiene</i>	<i>Zoölogy, Agassiz</i>180
W. A. Alcott.....157	Audubon.....121
Bain.....205	W. B. Carpenter.....199
Carpenter.....199	Darwin.....186

	PAGE
Special Subjects	
<i>Zoölogy</i> , Huxley.....	223
Michelet.....	155
Morse.....	250
Wallace.....	216

Text-Book Authors	
Adams.....	107
Alden.....	177
Anthon.....	153
Backus.....	258
Bailey.....	146
Bain.....	205
Baldwin.....	226
Blackman.....	243
Calkins.....	215
W. B. Carpenter.....	199
D. P. Colburn.....	217
W. Colburn.....	141
Dana.....	198
Davies.....	156
Day.....	115
DeGraff.....	243
Dilworth.....	77
Euclid.....	27
Farnham.....	222
French.....	221
Gray.....	189
Greenleaf.....	127
Guyot.....	180
Hart.....	188
Johonnot.....	221
Kotelmann.....	252

Text-Book Authors	PAGE
Legendre.....	97
Loomis.....	194
McElligott.....	197
MacVicar.....	230
Mace.....	268
Mason.....	139
Maxwell.....	269
Morse.....	250
Murray.....	93
Olmsted.....	134
Page.....	187
Phelps.....	140
B. Pitman.....	217
I. Pitman.....	199
Pooler.....	212
Porter.....	114
Preyer.....	256
Rein.....	264
Rickoff.....	222
Russell.....	156
Sanford.....	249
Schreber.....	181
Sheldon.....	220
Steele.....	246
E. E. White.....	232
Wickersham.....	225
E. Willard.....	128
S. Williams.....	262
S. G. Williams.....	225
Woolsey.....	161



ZOROASTER (Persian, 1000?,- B. C.), is so faintly outlined in history that little is certain except that he was a real person, and that he lived more than 800 years B. C. He found two stages of culture striving for mastery,—the *ahuras*, the breeders of cattle, and the *daévas*, who maltreated the cow and lived by plunder. He joined the former and led them to victory. From the religious dualism of his time he derived his dualistic scheme of the universe. From the beginning there existed the spirit of good and the spirit of evil, Ormuzd representing light and life and all that is good, and Satan all that is opposite. These spirits are in continual conflict for the soul of man. Wicked actions cannot be undone, but may be counter-balanced by good ones. When he dies if the balance of good deeds is in his favor he goes to paradise; if the balance is against him he goes to eternal punishment.



THALES (Greek, 640-546, B. C.), the founder of Greek geometry, astronomy, and philosophy, and chief of "the seven wise men of Greece", owed much of his fame to his prediction of the eclipse of the sun that occurred May 28, 585, B. C. He was engaged in trade, and learned the empirical geometry of surfaces in Egypt, but added to this the geometry of lines, and made it an abstract science. He thus laid the foundation of algebra, and he applied geometry to the measurement of heights and distances. He made valuable astronomical discoveries. In physics he believed that water was the origin of things, and that the earth floated upon a sea of this elemental fluid. He attributed the attraction of the magnet to its having a soul. He supposed all things to be full of gods. Yet all the Greek schools except that of Pythagoras took their origin from his doctrine, and he was hence the founder of the philosophy of Greece.



ESOP (Greek, 620? - 564, B. C.) was brought while young to Athens as a slave, but was eventually freed, and visited Croesus, king of Lydia, who made him ambassador at Delphi and charged him to pay four minae to each of the citizens. Owing to some dispute he declined to furnish the money, and the Delphians hurled him headlong from a precipice. The story that he was a monster of ugliness and deformity is now discredited, and it is believed that none of his fables are extant, those attributed to him being of oriental origin. They were popular at Athens, but were not written, and were in prose. Several authors turned them into poetry, those of Phædrus being most celebrated. The popular stories concerning him come from a life prefixed to a book of fables purporting to be his, collected by Maximus Planudes, a monk of the 14th century. Esop appears as a guest in Plutarch's "*Convivium*".



PYTHAGORAS (Greek, 582-500 B.C.), was a native of Samos, and about 529 emigrated to Crotona, in the south of Italy. Here he became the centre of a widespread and influential organization, more like a religious brotherhood than a philosophic school. He was a moral reformer rather than a speculative thinker, and the only doctrine of his school that was essentially his own was that of transmigration of souls, or metempsychosis. He was the first to raise mathematics to a science, uniting geometry with arithmetic. The central thought of his philosophy was the idea of number. His school was the first to discover the mathematical relations of musical intervals, and they considered the seven planets the golden chords of the heptachord—the harmony of the spheres. Dissensions arose about 510, and Pythagoras withdrew to Metapontum, where he died about 500.



CONFUCIUS (Chinese, 550-478, B. C.) appeared at a critical period of his country's history, when right principles had disappeared. He was of illustrious lineage, was eager for learning, and at 21 became a teacher. In 517 his disciples were so numerous to furnish him means to examine the royal library. At 51 he was made chief magistrate of Chungtoo, and ruled so well that he was made minister of crime in Lu and he became the idol of the people, but at 55 he lost favor with the ruler. For 13 years he travelled in the different states. In 483 he was recalled, but refused to take office, giving his last years to writing and teaching. He died in disappointment, but his death sent a thrill through China, and his teachings began to prevail. The dynasty of Ts'in sought to destroy his memory by burning his books, but the next dynasty honored his name. Foremost of his principles was the golden rule.



ARISTIDES (Greek, ?-468? B. C.), surnamed "the Just", first appears in history at the battle of Marathon, 490 B. C., where he was one of the ten generals, and persuaded the others to yield supreme command to Miltiades. He was made archon at Athens, but through the machinations of Themistocles was banished in 483. On the night before the battle of Salamis, he went to the tent of Themistocles, offered to assist him, and persuaded the other generals to follow his plan. In 479 he was general of the Athenians, and shared in the victory of Platæa, and in 477 he reconciled the allies to Pausanias. When the allies formed a confederation under the Athenians, Aristides drew up the laws and determined the amount of tribute. When the vote occurred on his banishment, a stranger asked him to write his vote. "Why do you want to banish him?" asked Aristides. "Because I am tired of hearing him called 'The Just'".



HIPPOCRATES (Greek, 460-375? B. C.) was born of a family of priest-physicians, and studied medicine under his father. He was the first to cast aside superstition and base the practice of medicine upon inductive philosophy. He studied carefully the records made at the hospitals of every case, and in his observations upon the natural history of disease showed himself a great clinical physician. He employed powerful medicines and practised blood-letting, but placed great reliance on diet and regimen. Of the 87 books attributed to him not all are genuine, but they have had wide influence, 70 editions being known of the "Prognostics" and 300 of the "Aphorisms". His age at death has been variously stated, at from 85 to 109 years. It is discredited that he refused to visit Persia during an epidemic because it would be aiding an enemy. He was venerated by the Athenians as a man of integrity and morality.



SOCRATES (Greek, 470-399 B.C.), whose fondness for questioning has made that form of instruction commonly known as "the Socratic method," left no writings behind him, but applications of his method are found in the "Memorabilia" of Xenophon, and in the dialogues of his pupil Plato. He began life as a sculptor, but soon gave himself to education, conceiving that he had a divine commission, witnessed by oracles, dreams, and signs, not indeed to teach any positive doctrine, but to convince men of ignorance mistaking itself for knowledge, and by so doing to promote their intellectual and moral improvement. His whole time was spent in public, where he talked to all comers, questioning them about their affairs, about their notions of morality, etc., seeming to be ignorant of the result to which their enforced answers tended. He was accused of atheism and immorality and unjustly condemned to death. §



ISOCRATES (Greek, 436-338 B. C.) the most celebrated teacher of his age, had the best education Athens could afford. Having lost his fortune during the Peloponnesian war he adopted the profession of teacher and in 392 opened his school at Athens. His instruction was based on rhetorical composition, but included also philosophical grasp and treatment. Cicero says that in his school the eloquence of Greece was trained and perfected; its disciples were brilliant in pageant or in battle, foremost among the accomplished writers or powerful debaters of their time. It drew students from the islands of the Aegean, the cities of Sicily, and the distant colonies of the Euxine. Every one of the contestants at Halicarnassus in 351 had been the pupil of Isocrates. His fees were enormous, and he became one of the 1,200 richest citizens. He surpassed in greater breadth of view, in a higher morality, and in thoroughness.



PLATO (Greek, 429-347 B. C.), was the most distinguished scholar of Socrates. In his 40th year he began teaching in the Academy at Athens his celebrated system of philosophy, known as Idealism. Ideas he calls the divine types or forms, constituting the essences of things according to their several species, genera, families and classes. These ideas are the substance of all knowledge, and the human intellect attains to the substance of them by "dialectics," that is, systematic examination and argument, by which the non-essential are distinguished from the essential parts. Plato sought to establish a sound theory of human life, and in his "Republic" he describes in detail his ideal of a perfect community, describing how men must be taught and trained to perform their several parts in such a community. The supreme idea is the idea of the good, and human perfection consists in acquiring the knowledge of good.†



DEMOSTHENES (Greek, 384-322, B. C.) was not stalwart of body and had an impediment of speech, yet became the greatest of Greek orators. He entered public life in 355, and till his death pleaded consistently for Athens as the natural head of Greece and the defender of law against barbaric force. He urged that the Athenian should set his duty to the city above his private interests. His Philippic orations were only parts of his main purpose, and he was one of the ambassadors sent to Philip in 346. From this time till the battle of Chaeronea (338) his authority grew, and that calamity left him still paramount. In 330 Æschines attacked the proposition to grant Demosthenes a golden crown, and the latter triumphed overwhelmingly in his most splendid oration "On the Crown". In 322 he favored the Lamian war. When Greece was defeated he was condemned as a traitor and fled to Ægina, where he committed suicide.



ARISTOTLE (Greek, 384-322 B.C.), often called the "Stagirite," was educated as a physician, but at 18, became a pupil of Plato, who called him "the intellect of the school." Aristotle established a school of oratory. From 343 to 340 he was tutor of the prince Alexander. In 334 he opened the "Lyceum," where he matured his philosophy and attained his unsurpassed reputation as a philosophical writer and teacher. From his habit of walking about in the garden while teaching, his was called the "peripatetic" philosophy, from *περιπατεῖν*, to walk about. In 323 he had to fly from Athens on charge of atheism, and he died that year at Chalcis. He created the science of deductive logic, and wrote on metaphysics, ethics, politics, rhetoric, etc. In the 7th and 8th chapters of his "Politics" he treats of education, holding that man should be trained by the State.†



EPICURUS (Greek, 342-270 B.C.), was the son of a schoolmaster, whom he assisted at Samos and at Colophon, but became interested in philosophy, and in 327 opened a garden at Athens, where he taught for 36 years, the venerated head of a remarkable society such as the world had never seen, made up of both men and women. The drink was water, the food was barley-bread. They were held together by the siren-like charm of his personality, and by the free sociality which he inculcated and exemplified. He wrote 300 books,—the principal one a treatise on nature in 37 volumes, of which fragments still exist. "Steer clear of all culture," was his advice to a young disciple, in recoll from Plato and Aristotle, who seemed to him to teach aristocracy of intellect rather than commonwealth of happiness. Prudential wisdom seemed to him the means of a happy life, and thus the chief excellence.‡



ZENO (Greek, 342-270, B. C.) founder of the Stoic school of philosophy, was born in Citium, came to Athens at 22, and attached himself to the cynic Crates. Becoming dissatisfied with the cynics' disregard for conventionality and indifference to speculative inquiry, he joined the school of Stilpo, and afterward that of Polemo, the academician. He then opened a school of his own in the "Painted Porch" (*ὁδοῦ ποικίλης*, hence the word stoic), where he taught, honored by all, till in old age he committed suicide. He adopted the logical criterion, the adaptation of Heraclitean physics, and the introduction of the leading ethical tenets. The Stoics held that the universe is governed by one good and wise God; that men have bodies like animals but reason like gods; that the good is not necessarily identified with happiness; and that the fountain of virtue is life according to nature.



EUCLID (Greek, 300? — ?, B. C.) is said to have founded the mathematical school of Alexandria. But little is known of him save his books, of which his "Elements of Geometry" is the most famous. It was for 20 centuries the main text-book, and is still widely used. He replied to King Ptolemy, who asked if he could not learn geometry more easily than by studying the Elements, "There is no royal road to geometry." "He arranged the discoveries of Eudoxus, perfected those of Theaetetus, and reduced to invincible demonstration many things that had previously been more loosely proved." As Appollonius was the great geometer, so Euclid was "the great elementator". His treatment of parallels, however, depends on an axiom that is not axiomatic, and he makes sparing use of superimposition as a method of proof. The classification, too, is imperfect, and the nomenclature defective.



ARCHIMEDES (Greek, B. C., 287-212) was the most celebrated geometrician of antiquity, but is known best for his application of mathematics to mechanics. He invented the water-screw, and discovered the principle of the lever. Of the power of the latter he boasted, "Give me a place to stand on and I will move the world." Being asked to see if there was silver in a crown of King Hiero ordered to be made of gold, without destroying it, he observed the displacement of water as he stepped into the bath and discovered that this would afford a test. He was so gratified that he rushed through the streets naked as he was, crying "Eureka". "I have discovered it." By military engines that he invented he postponed the fall of Syracuse. When Syracuse was taken he sat in the public square, drawing figures in the sand, and called to the Roman soldier not to spoil his circle, but he was remorselessly cut down.



MARCUS TULLIUS CICERO (Roman, 106-43 B.C.) learned law and oratory, and Greek philosophy and literature under the best teachers at Rome, at a time when the orator was a speaker both in legal and political causes, and needed, as he points out in his book on education, "*de Oratore*", almost universal knowledge. His first important speech was delivered in 81 B.C., and at 30 he was recognized as a leader at the Roman bar. In 76 he was made quæstor, and in 70 impeached the infamous Verres. In 66 he became prætor, and in one of his great orations ("*pro lege Manilia*") supported the appointment of Pompey. In 63 he became consul, and foiled the plot of Catiline. For a time he was looked upon as the father of his country. In 58 he was exiled, and in 57 he was almost unanimously recalled, but could not regain his former influence. His last years were spent at the bar, and in writing works on rhetoric and philosophy.



TITUS LUCRETIVS CARUS (Roman, 98-55 ? B. C.), known as Lucretius, gives in his poem *De Rerum Natura* the most complete account of the chief effort of the ancient mind to explain the beginning of things and to understand the course of nature and man's relation to it. "Physical philosophy in the present day is occupied with the same problems as are discussed in the first two books." "No one else combines in the same degree the contemplative enthusiasm of the philosopher, the earnest purpose of a reformer and moral teacher, and the profound pathos and sense of beauty of a great poet. He stands alone among his countrymen as much in the ardor with which he observes and reasons on the processes of nature as in the elevation with which he recognizes the majesty of her laws." Little is known of his life except that he committed suicide in an interval of insanity.



LUCIUS ANNEUS SENECA (Roman, 3 B.C.-65 A.D.), the most brilliant figure of his time, and the most eminent of the writers of the silver age, had the wit to discover that conduct could furnish inexhaustible topics of abiding interest far superior to the imaginary themes set in schools, and treated plain matters of urgent personal concern with an earnestness that aimed directly at the reader's edification, progress toward virtue, and general improvement. His works of this kind, which might be called moral essays, are 12 "Dialogues," 3 books "Of Clemency," 7 "On Benefits," and 20 of "Letters to Lucullus." They are remarkable for their anticipation of modern ethical conceptions, and their exhortations to forgive evil and overcome evil with good, and their recognition of the principle of universal benevolence. In 48, Seneca was made tutor of Nero, and the first years of that emperor's reign show what principles he inculcated. §



MARCUS AURELIUS ANTONINUS (Roman, 121-180), noblest of pagans and crown and flower of stoicism, was fascinated by the philosophy of Diogenes, the stoic, and abandoned rhetoric and poetry for philosophy and the law. In 140 he was made consul; in 161 became joint emperor with Verus, who married his daughter; and in 169 sole emperor. In 177 he instituted a persecution of the Christians in which Polycarp and Justin perished, but it is evident that he knew nothing of Christian ethics, for the system of morality in the "Meditations" of Aurelius resembles that of the New Testament. These meditations were written as occasion offered—in the midst of public business, sometimes just before battle,—probably for the guidance of his son, and are the best non-inspired reflections on practical morality. The goal he aimed at was tranquillity, and his precepts are the record of his practice.



CLADIUS GALEN (130-200?) began the study of medicine in 145, and studied in Alexandria under Heraclianus. In 164 he went to Rome, where he healed Eudemus and others, and became known as a "wonder-worker" and a "wonder-speaker". He was physician to Marcus Aurelius and to his son Commodus. He wrote nearly 500 treatises, including works on logic, ethics, and grammar. Of published works attributed to him 83 are considered genuine. He was an unusually prolific writer on logic, and the fourth syllogistic figure has been attributed to him. Of all the writers of antiquity he was the best anatomist. His writings are the common depository of the anatomical knowledge of the day, the osteology being particularly complete, and his description of muscles nearly perfect. He believed that nerves of sensation originated in the brain, and those of motion in the spinal chord,



CHARLEMAGNE (742-814) ruled the enormous Frankish territory for 46 years. By 32 years of fighting he subdued the Saxons, the last Germanic opponents of christianity. In 800 he was crowned emperor of the Romans. But he showed the same energy in internal as in external affairs, and called to his court men of learning, especially Alcuin, whom Guizot calls his intellectual prime minister. Alcuin came to him in 782 and became master of the palace school, where the king himself was an eager pupil. In 787 Charlemagne sent a proclamation to the abbots of the monasteries reproving their illiteracy, and directing them to engage fit teachers. In 789 he ordered candidates for the priesthood to be taken from the sons of freemen; and in 802 ordered every one to send his child to school, though he did not intend organized legal compulsion, a thought far beyond the possibilities of that age.



LEONARDO OF PISA (italian, ?—?) was the son of a merchant of Pisa, and travelled about the Mediterranean, acquiring the geometry of Euclid, the algebra of Egypt, and the arithmetic of India. In 1202 he published his "*Liber Abaci*", setting forth methods of calculating almost as completely as a modern arithmetic. This probably gained him access to the court of Frederick II. In 1220 he published his "*De Practica Geometriae*", written for those familiar with Euclid, able to follow rigorous demonstrations and needing them. It contains a trigonometrical chapter, with the expression "*sinus versus arcus*", and solves the problem to find a square number which remains a square when 5 is added to it. In 1225 he wrote "*Liber Quadratorum*". At a time when mathematics in Europe had sunk to the lowest ebb he made it the task of his life to disseminate ancient mathematics in Arab dress.



ST. THOMAS AQUINAS (Italian, 1225-1274) the apostle of scholasticism, studied in the university of Naples, and at the famous Dominican school at Cologne under Albertus Magnus, whom he followed to Paris, where he was graduated in 1248. He returned to Cologne as lecturer. He was chosen to represent at Rome the Begging Friars in their controversy with the University of Paris, and secured for them the liberty of teaching. In 1257 he began to lecture upon theology in Paris, Rome, etc., and from this time on his life was one of incessant toil, and usually of travel. In 1272 he was called back to the professor's chair at Naples, and wrote his great work "*Summa Theologiae*". He refused an archbishopric, and an abbacy, and died from over-exposure in travelling during illness. He did more than any other writer save Augustine to fashion the theological language of the church.



JOHN WYCLIF (English, 1320-1384), "the greatest of the reformers before the Reformation," was educated at Oxford, and made master of Balliol college in 1361, but shortly resigned to become a priest. In 1374 he was second in a commission sent to Bruges to confer with the papal legate as to abuses complained of by the English parliament. He became outspoken against the pope, and in 1378 was called to account for his utterances, but London citizens burst into the chapel and frightened the synod into stopping the proceedings. He was again summoned before the prelates at Lambeth, but escaped with an injunction. He now translated the Bible into English, and challenged the doctrine of transubstantiation. In 1382 he was banished from Oxford, and died two years later of paralysis. His followers were called the Lollards. He did much to establish sounder principles of education.



JOHN COLET (English, 1466-1519) after graduating from Oxford went to Paris and Italy to perfect himself in the classics, then poorly taught in England. Here he formed his friendship with Erasmus. On his return he read lectures at Oxford, and in 1505 became prebendary and soon after dean of St. Paul's, London. The great work of his life was the founding in 1509 of St. Paul's school for the education of 153 scholars "of all nations and countres indifferently." This was for the time on a large scale, and the course of instruction was prescribed with wide and liberal views, not tinged with severity. It was the first school in England in which Greek was publicly taught after the revival of letters. The first master was the grammarian, William Lily. Colet's religious opinions were so much more liberal than those of his contemporaries that he was deemed a heretic, and died in retirement at Richmond.



ERASMUS (Dutch, 1467-1536), the most famous scholar of the 16th century, is said to have "laid the egg which Luther hatched," aiding the Reformation, and doing much to bring about the revival of sound learning. Though deeply imbued with the classical spirit, he anticipated modern educational reformers by his advocacy of the value of scientific studies, and of the training of women.† He was the first "man of letters" who had appeared in Europe since the fall of the Roman Empire, able to bring his vast acquirements to bear upon the life of his day. He did not study antiquity for its own sake, but as an instrument of culture. At the outbreak of the Reformation he was sought after by many universities, and his word was the law of the Humanists. But he was little fitted for troubled times. His influence declined, and he sank into neglect, and died at Basel, "a man without a country."§



NICOLAUS COPEERNICUS (German, 1473-1543) after four years at the university of Cracow, studied astronomy at Bologna and Padua, and in 1499 was made doctor of medicine. In 1500 he held a chair of mathematics at Rome, and in 1503 went to Frauenburg, where he studied the stars. He evolved from the astronomical theories of his predecessors the present accepted theory that bears his name. The preparation of his treatise *De Orbium Coelestium Revolutionibus Libri VI* occupied him from 1507 to 1530. Just after the book was finally printed in 1543 he was suddenly attacked for the first time by a violent illness, and when a copy of the book was put into his hands he looked at it, seemed conscious of what it was, and then relapsed into insensibility, which soon lapsed into death. The book had been printed under superintendence of Rheticus, who had already published Copernicus's theories in a letter written in 1540.



MARTIN LUTHER (German, 1483-1546), most noted of the Protestant reformers, was ordained priest in 1507, and became teacher in the University of Wittenberg. He grew indignant at the sale of indulgences, and nailed 95 theses against them upon the door of the church, denying to the pope the power to forgive sins. In 1521 he declared himself before the diet at Worms, in 1529 engaged in a conference at Marburg, and was near at hand when in 1530 the Protestant creed was established at Augsburg. He vigorously opposed the schools of the time, and sought to substitute a curriculum that would include Latin, Greek, Hebrew, history, mathematics, and music, with strong emphasis upon religion, and place for logic and rhetoric. Libraries were important, and home life should be disciplined by a gentle firmness which would assure prompt obedience, yet win cordial love.



FRANÇOIS RABELAIS (French, 1490?-1553), - the greatest of French humorists, was brought up a Franciscan monk, but became in 1524 a Benedictine. In 1530 he became a secular priest, was graduated in medicine at Montpellier the same year, and in 1532 became hospital physician at Lyons, where his "Pantagruel" had appeared as early as 1533 and his "Gargantua" by 1535, though the third book did not appear till 1546, the fourth till 1552, and the fifth till after his death (1552). In 1535 the authorities at Lyons voted his position vacant on account of his absences, and he thereafter led a wandering life, and nothing certain is known as to his death. His "Life of Gargantua and the Heroic Deeds of Pantagruel" is a fantastic work, much of it in revolting language, but exerted enormous influence. An excellent epitome of it is found in Williams's "History of Modern Education", pp. 68-73.



IGNATIUS DE LOYOLA (Spanish, 1491-1556), founder of the order of the Jesuits, was at first a soldier, and had a leg broken by a cannon-ball at the defence of Pampeluna. During his enforced idleness he read a book called "The Lives of the Saints", which turned his ambition in a new direction. In 1522 he hung up his arms, and devoted himself to spiritual warfare. He set out barefoot on a pilgrimage, and withdrew to a solitary cavern. He was afterward blessed by the pope, and went to the Holy Land, returning to Barcelona in 1524. He now began to educate himself for preaching, completing his studies at Paris, where in 1534 he formed the Society of Jesus, or the Jesuits, who got from him not only their general spirit, but their rules and constitutions. In 1840 he was elected first general of the society. "Since the revival of learning no body of men has played so prominent a part in education as the Jesuits." †



GIOVANNINO LUDOVICO VIVES (Spanish, 1492-1540) was a friend of Erasmus and of Sir Thomas More, who looked upon him as a prodigy. Schmidt calls him one of the most eminent teachers of his age. He lectured at Paris and at Oxford, and was the author of several pedagogical books. He agreed with Erasmus in his estimate of the importance of education; in regard to the education of women, which he would make sufficient to enable them to study classic authors; in considering classical training the best means of culture; and in despising scholasticism. His ideal of the teacher is lofty, demanding not only scholarship but aptness to impart, incorruptible morals, and a life worthy of the dignity of his calling. He advocated inductive teaching, all studies starting from the pupil's standpoint of experience, the rules of grammar to be taught from observation of examples, etc.*



JOHANN AGRICOLA (German, 1492-1566) founder of antinomianism, studied at Wittenberg, where he became acquainted with Martin Luther, and in 1519 accompanied him to the assembly of German divines at Leipzig, acting as secretary. After teaching for a time at Wittenberg he went in 1525 to Eisleben as teacher in the school of St. Andrew. In 1536 he returned to Wittenberg as professor, and was welcomed by Luther; but controversy between them soon arose because of Agricola's view that Christians were free from the law, being under the gospel alone, a belief now called Antinomian. In 1540 Agricola went to Berlin, and until his death was court preacher and superintendent at Brandenburg. He wrote several theological works, and made a collection of proverbs (1528), which he illustrated with appropriate commentary. He is sometimes called from his birthplace Magister Islebius.



PHILIPP MELANCHTHON (German, 1497-1560), "the Preceptor of Germany," was foremost among the practical educators of his century. At 21 he was made professor of Greek at Wittenburg, and remained there till his death, lecturing on classics, the Bible, dogmatics, ethics, logic, and physics, sometimes to 2,000 students, over whom he had remarkable influence. His text-books were many and widely-used. He also interested himself in school organization. He would have three grades, the first teaching reading, writing, and a good stock of Latin words; the second, grammar, simple Latin reading, and music; the third, for the élite youth, music, higher Latin authors, and ability to speak and write in Latin. He believed that "no greater harm can be done to all arts, than when the youth is not well practised in grammar"; but thought "too many rules ought not to be given, lest they frighten away by their prolixity."



THOMAS PLATTER (Swiss, 1499-1582) as a boy became fag to a party of "bacchants" or "A B C-shooters", who from 1300 to 1600 used to wander over Germany, stopping here and there to teach, and taking with them boys nominally as scholars, who really were obliged to beg and steal for them. After 15 years of this wandering, he ran away from his "bacchants" and went to school in Schellstadt and Zurich, where he studied day and night, keeping himself awake by putting raw turnips, sand, or cold water into his mouth, or grinding his teeth together, tutoring and making rope for support. In 1541 he was appointed teacher of the school at Basle at a salary of 100 florins for himself and 100 florins for his assistants. He held the place successfully till 1578. In his 73d year he wrote an autobiography, which is among the best pictures extant of the school life of that time. It is remarkably frank and simple in narration.



GIROLAMO CARDANO (Italian, 1501-1576) took his degree as doctor of medicine at Padua in 1525. By 1538 he had become a celebrated physician of Milan, and was professor of mathematics there. Subsequently he taught in Bologna till 1570. His works, published in 10 volumes in 1663, begin with his autobiography, and include treatises upon almost every department of learning; including observations on heat, cold, light, colors, etc., since reproduced as original discoveries. He took deep interest in algebra and geometry, which he considered the highest attainments of man's mind. Luigi Ferrari was his pupil, and he co-operated with Nicolò Tartaglia. As a physician he was called to Scotland to treat the bishop of St. Andrews, was received with honor by Edward VI. and was made a member of the college of physicians at Rome. He was as remarkable for his eccentricities as for his mental powers.



JOHN KNOX (Scotch, 1505-1572) after education at the University of Glasgow was for some ten years a priest of the church of Rome, but in 1546 became a protestant and was called to be a minister. He was captured by the French and labored for a time in the galleys. Upon his release in 1549 he went to London, and preached at Berwick for two years, where he substituted sitting for kneeling at communion. After the death of Henry VI in 1553, he retired to the continent, and from 1556 to 1559 preached and wrote in Geneva. In 1559 he went to Scotland and was elected minister of St. Giles. He was among the foremost in the establishment of presbyterianism, and was one of the five to draw up a "Boke of Discipline", one-fifth of which, believed to be almost wholly his, is devoted to education, and determined the policy of the nation toward free schools. In 1562 he was tried for treason but acquitted.



JOHANN STURM (German, 1507-1589), the most renowned teacher of his age, has left his impress on the secondary school system on all northern Europe since his day. When 30 years old he was called to Strasburg to organize the gymnasium, and was the head of it for 47 years. The fame of it drew pupils from all quarters, so that in 1578 its students numbered several thousands. Its reputation was due to its thoroughly systematic organization, being the first scheme we have looking to an *extended, systematic, well-articulated* course of studies; and to its clearly defined aim to train pious, learned and eloquent men. Sturm's method of teaching Latin and Greek was by double translation, from Latin into German, and *vice-versa*. The pedagogic ideas which controlled Sturm's method were: All subjects to be kept within range of the pupil's present ability; all teaching to be made clear and definite; little at a time



ST. FRANCIS XAVIER (French, 1506-1552) after graduation from Paris became in 1528 Aristotelian lecturer at the Collège de Beauvais. Ignatius Loyola came there the same year, and recognized in him the qualities which made him the first missionary of his time. He became a Jesuit in 1534, and in 1536 went to Italy intending to attempt the conversion of the Moslems in Palestine, but by the outbreak of war was compelled to remain in Italy. After the pope had confirmed the order of Jesuits in 1540 he became secretary, but was soon made papal nuncio in India, where he was so successful as a missionary that he was credited with a miraculous gift of tongues. In 1547 he sailed for Japan, remaining until 1551, and in 1552 went to China where he died of fever. His noble and brilliant work is acknowledged by all writers, catholic and protestant alike. He has been well named "The apostle of the Indies". His body is buried at Goa.



JOHN CALVIN (French, 1509-1564) was educated for the Catholic priesthood, but changed to the study of law. Still he studied the Bible, and became a follower of Luther. About 1530 he gave up the law for theology. In 1532 he published his first book, "*De Clementia*", and became recognized as the head of the Reformation movement in France. In 1534 he celebrated the first Protestant communion near Poitiers. To escape persecution he retired to Basle in Switzerland, where he prepared his "Institutes of the Christian Religion" (1536). He joined Farel at Geneva, and became teacher of theology. Here he sought to establish schools throughout Switzerland, with religious instruction prominent. In 1537 he was banished from the city, and lived till 1541 in Strassburg, returning then to Geneva. In 1553 he secured the conviction of Servetus, who was burned at the stake. He secured theocratic government in Switzerland.



ROGER ASCHAM (English, 1516-1568), was the best-known English teacher of the sixteenth century, being tutor among others to Queen Elizabeth. He embodied his practice and his opinions in "The Schoolmaster," which has become an English classic. This book gives the author's method of teaching Latin (by double translation), with charming digressions on pedagogic topics. He believed that grammatical forms and rules are "sooner and surer learned by examples of good authors than by the naked rules of grammarians." "Ere the scholar have constructed, parsed, twice translated over by good advertisement, marked out his six points by skilful judgment, he shall have necessary occasion to read over every lecture a *dozen times at the least*; which because he shall always do in order, he shall do it always with pleasure . . . and pleasure allureth love; love hath lust to labor; labor always obtaineth his purpose."



MICHEL EYQUEM de MONTAIGNE (French, 1533-1592), in his brilliant "Essays" founded the school of thinkers on education of which Locke and Rousseau were afterward the great exponents. In teaching languages he would discard grammar and teach by conversation. He insisted upon physical education. "We have not to train up a soul, nor yet a body, but a man; and we cannot divide him."† Put in the shortest form, Montaigne's idea of the end of education is, that a man should be trained to the use of his own reason. "A man can never be wise save by *his own wisdom*." The key-notes to his method are these:—Self-activity of the pupil in the use of all his powers and capabilities; things before words; judgment and understanding before memory; adaptation of instruction to the pupils' present abilities.* Like Milton and Locke, he dealt only with the education of gentlemen.



ANOTHER PORTRAIT



LUDOLF von CEULEN (sometimes written **KEULEN** and **COLLEN**) (Dutch, 1540-1610) famous for approximating the squaring of the circle, was born at Hildesheim, and became teacher of mathematics in Livland, Antwerp, Breda, Amsterdam, Delft, and Arnheim, and professor of *Kriegsbaukunst* in the University of Leyden. He wrote "*Vanden Cerckel*" (1596) and "*De Arithmetische en geometrische fondamenten*" (1616). The Jews had regarded the ratio as 3, the Egyptians as $3.16+$, Archimedes as $3.1-7+$, Ptolemy as 3.141552 , and the Hindus as 3.1416 . Adrian of Metz by a lucky but illogical process got 6 correct fractional figures, Viète got 10, Adriaan von Roomen got 15. Von Ceulen calculated the ratio of the circumference to the diameter with great labor to 35 decimal places. The number so obtained, $3.14159+$ was called after him the Ludolf number, and the 35 decimals were cut into his tombstone in St. Peter's church, Leyden.



CLAUDIUS AQUAVIVA (Italian, 1543-1615) entered the order of Jesuits at 25, and at 38 became its head. The organization of this body was largely his work. In 1.84 he appointed a school commission, consisting of six distinguished Jesuits from the various countries of Europe, who spent nearly a year in consultation at Rome. They framed the ordinances regulating studies of the order which after revision and approval by Aquaviva finally appeared as the "*Ratio atque Institutio Studiorum, Societatis Jesu*" (1599), one of the most famous of pedagogical books. By this the order was governed until 1832, when the curriculum was enlarged to include physical science and the modern languages. One of the most important of the many superior features of this system was the careful training of teachers, two years of preparation being held indispensable. It also provided carefully for the physical welfare of the students.



TYCHO BRAHE (Danish, 1546-1601) learned Latin at seven, and in 1559 was sent to Copenhagen to study philosophy and rhetoric. The great eclipse of the sun, Aug. 21, 1560, occurring at the instant predicted, called his attention to astronomy, and though sent in 1562 to Leipzig to study law he gave all his attention to the stars. Having continued his studies at Rostock and Augsburg, in 1571 he returned to Denmark, where his uncle helped him in his researches. In 1574 he read lectures at Copenhagen, and in 1575 travelled through Germany to Venice. To prevent his removing to Basle, King Frederick II of Denmark gave him funds for an observatory at Uraniburg, but after the king's death Brahe was compelled to give up his work there. He went to Prague, where he was magnificently treated, but died before he had long enjoyed his fortune. He had however been joined by Kepler, who owes his fame to Brahe's lessons.



JOHN NAPIER (English, 1550-1617), the inventor of logarithms, and the first Englishman to take part in the advance of science, after education at St. Andrews and Paris settled down in Scotland as a country squire, engaged in political and theological contests, and invented engines of war. But in 1614 he published his treatise on logarithms, explaining their use but not their construction. This abbreviation of multiplications and divisions he worked out by arithmetic and geometry alone, not recognizing their connection with the exponents of algebra. In 1617 he published his "Rabdologia", showing the use of numbering rods, commonly called "Napier's bones", for multiplication and division. He also gives a method by the use of little plates of metal in a box, and another, "local arithmetic", which is performed on a chess-board, and is based on the expression of numbers in the scale of radix 2.



JACOBUS ARMINIUS [or **HERMANUS**] (Dutch, 1560-1609), founder of Arminianism, after education at Leyden went in 1582 to Geneva and Basle, travelled in 1586 in Italy, visited Rome, and in 1588 was ordained at Amsterdam. He was commissioned to organize the educational system of the city, and did it well. In 1603 he was made professor of theology at Leyden, where he remained till his death. He was the founder of the anti-Calvinistic school of theology. Calvinism had become supreme in Holland, but the rigor of uniformity provoked reaction. Arminius was chosen in 1589 to controvert Koornhert, who opposed a conditional to unconditional predestination. Thus led to study the subject, Arminius found himself inclined to assert the freedom of man and limit the range of the unconditional decrees of God. He was made rector of the university in 1605, but resigned after one year. He died worn out by ungenial controversy.



FRANCIS BACON (English, 1561-1626) was a precocious child, and entered Cambridge at 13. After study in Paris he practised law, and began to advance rapidly about 1603, becoming attorney-general in 1613, keeper of the great seal in 1617, and lord chancellor in 1619, with the title Baron Verulam. (He was never Lord Bacon.) But he used this last office corruptly, and in 1621 was convicted on his own confession, and banished from public life. Though he was mean in character, he was magnificent in intellect. His "Essays" appeared in 1597, his "Advancement of Learning" in 1605, his "*Novum Organon*" in 1620. By recalling the minds of men from barren speculation, and from exclusive humanistic study, to the relief of man's estate through the investigation of nature by exact observation and rigorous experiment leading to induction of her laws, he added an entire pedagogy and a new realm of profitable study.



GALILEO GALILEI (Italian, 1564-1642) in 1581 began to study medicine at Pisa. In 1583, while watching the vibrations of the great bronze lamp in the cathedral he discovered the isochronism of the pendulum, using it more than fifty years later in the construction of an astronomical clock. In 1588 he became mathematical lecturer at Pisa, and began the series of experiments that brought on him the enmity of the followers of Aristotle, as when from the leaning tower he showed that the velocity of falling bodies is not proportional to their weight. From 1592 to 1610 he was professor of mathematics at Padua. In 1609 he made a telescope and in 1610 discovered Jupiter's satellites. He had defended the Copernican theory, but in 1616 was admonished not to hold, teach, or defend it, and was silent till in 1632 he published his "Dialogue of the Two Systems". This was condemned, and he died in nominal imprisonment.



JOHN KEPLER (German, 1571-1630), the founder of physical astronomy, after education in theology at Tübingen, reluctantly accepted in 1594 the chair of science at Gratz, afterward becoming assistant to Tycho Brahe at Prague. On the death of the latter he succeeded him as imperial mathematician, and was entrusted with Brahe's papers and tables. He had long before undertaken to account for the solar system, and in 1609 he published his observations on the orbit of Mars, establishing the laws of elliptical orbits and equal areas. In 1619 he published a treatise on comets, establishing the third law, that of the sesquiplicate ratio between the planetary periods and distances. He had in 1612 removed to Linz as mathematician for Upper Austria, in 1627 going on account of the siege of Ulm, where he published his "Rudolphine Tables". The duke of Wallenstein assumed the salary due him, and in 1628 he removed to Sagan.



VINCENT DE PAUL (French, 1576-1660), an illustrious saint of the Catholic church, was made a priest in 1600, and soon after was captured by pirates and sold into slavery at Tunis. He reconverted his master to christianity, and escaped to France in 1607. He became teacher of the children of the commandant of the galleys at Marseilles, and in 1619 was made almoner-general of the galleys. While here he offered himself, and was accepted, as a prisoner in place of a convict overwhelmed with grief at leaving his family destitute. Meanwhile he had founded an association of priests called Lazarists, who devote themselves to the work of assisting the clergy by preaching in districts to which they are invited by local pastors. From this time his life was devoted to works of charity and benevolence. He established the first foundling hospital at Paris, and provided for the education of this hitherto neglected class.



WILLIAM HARVEY (English, 1578-1657), the discoverer of the circulation of the blood, after graduating from Cambridge in 1597 went to Padua to study medicine, returning in 1603 an M.D. In 1607 he became fellow of the Royal college of physicians, and in 1615 lecturer. In his first course of lectures he brought forward his theory of the circulation of the blood, showing that the blood in the arteries was of the same kind as that in the veins, and that the heart was the motive power of its movement. His theory lacked only the capillary channels by which the blood passes from the arteries to the veins, discovered in 1661 by Malpighi. His life was full of honors. In 1609 he was made physician of St. Bartholomew's hospital: he was physician of James I and of Charles I: he was warden of Merton college, Oxford, and in 1654 elected president, resigning the next day, but becoming conciliaris. He left the college his estate.



CORNELIUS JANSEN (Dutch, 1585-1638) after graduation in 1640 from Louvain taught for a time in Paris, and afterward became head of the episcopal college at Bayonne. In 1617 he returned to Louvain to take charge of the college of St. Pulcheria, but gave it up to become in 1619 professor of theology, and in 1630 of Biblical exegesis. In 1636 he became bishop of Ypres. He died while preparing to print his great work upon St. Augustine, upon which he had spent 22 years. It appeared in 1840, with an epilogue attacking the distinctive theology of the Jesuits, and making claims as to predestination not unlike those of Calvin. In 1641 it was prohibited by the Inquisition, and in 1643, 1653, and 1705 by papal bulls. It was because Arnauld and the other Port-Royalists refused to yield to this condemnation that their schools encountered such fatal opposition from the Jesuits, and in 1710 the schools were closed.



JEROME BIGNON (French, 1589-1656), to whom was due the founding of the Port Royal schools, was a precocious child. Before he was 10 he had acquired an enormous amount of information, and at 12 he published "Chorographie, ou Description de la Terre Sainte". Henry IV made him tutor to the Dauphin. In 1604 he wrote his "Discourse on the City of Rome" and in 1605 a "Summary Treatise on the Election of the Pope". Afterwards he devoted himself to the study of the law, wrote in 1610 a treatise on the precedence of the kings in France, and in 1613 edited Merculfe's "Formulae". In 1620 he became advocate-general to the grand council, and in 1628 to the parliament of Paris. In 1642 Richelieu put him in charge of the public library. He was interested in Saint-Cyran's ideas upon education, and put his two sons into Saint-Cyran's hands; it was for them that the Port Royal schools were founded.



JOHN AMOS COMENIUS (Moravian, 1592-1671), was a Bishop of the Moravian Brethren, but gave a life of untiring zeal to develop a system of education that should educate. He took up the work begun by Ratich, and began by simplifying the Latin grammar. He afterward wrote "*Didactica Magna*" but in the meantime published (1631) his "*Janua Linguarum*," which soon made him famous. A simpler edition, illustrated, was issued in 1657, under the name of "*Orbis Pictus*," a series of rude engravings of sensible objects, accompanied by a description of them in short and easy sentences. This became the most popular text-book in Europe.† He was first to bring the mind of a philosopher to bear practically on the subject of education. Montaigne, Bacon, Milton had advanced principles, but Comenius applied them. His principles are fully stated in his "*Life and Works*" by Laurie (\$1.00).●



RENE DESCARTES (French, 1596-1650) after an adventurous early life had volunteered in the Bavarian service and in 1619 was in quarters at Neuburg on the Danube, when he got to reflecting on the science of method, and was filled with enthusiasm as he recognized that he had struck the roots of a marvelous science. In 1621 he quit military service and began to devote himself to study and reflection. From 1629 to 1649 he lived in Holland, and he had been but a few months at the Swedish court, when he died suddenly. "Had Descartes contributed to education nothing more than the fundamental maxim of his method, he would have deserved long remembrance in its history: * * * never to receive for true anything that is not known to be such on reliable evidence: and to comprise no more in our judgment than what is so clearly presented to our minds that we have no occasion to call it in question'."*



PIERRE de FERMAT (French, 1601-1665) was for some time councillor of the parliament of Toulouse, and an accomplished general scholar, but became famous as a mathematician. While still a boy he made some discoveries in regard to the properties of numbers on which he afterward built his method of calculating probabilities. He discovered a simpler method than that of Archimedes of quadrating parabolas, and a method of finding the greatest and smallest ordinates of crooked lines. His method led to a controversy with Descartes. His complete mathematical works were published in 1670 and 1679. The first volume contains the "Arithmetic of Diophantus" with notes and additions. The second, besides the papers already referred to, contains treatises on maxima and minima, on tangents, on centres, on the rectification of curves, various other treatises, and his correspondence.



JOHN MILTON (English, 1608-1674), known to his own age as a vigorous political pamphleteer and a learned theological controversialist, and to all after ages as the author of "Paradise Lost," was also a schoolmaster, undertaking in 1639 the education of two nephews, and afterward taking in other pupils. He published the tractate, "Of Education" in 1644. Mark Pattison says his definition of education has never been improved upon: "I call a complete and generous education that which fits a man to perform justly, skilfully, and magnanimously all the offices, both private and public, of peace and war."[†] The young were to be led on "by the infinite desire of a happy nurture; for the hill of knowledge, laborious indeed at the first ascent, else is so smooth, so green, so full of goodly prospect and melodious sounds on every side, that the harp of Orpheus was not more charming."[†]



ANTOINE ARNAULD (French, 1612-1694), the most celebrated of the Port Royal authors, was the 20th child of the most famous advocate of his time, who in 1594 had defended the University against the Jesuits. He took his degree as doctor of theology at the Sorbonne in 1641, and gave himself and his property to Port Royal. He espoused the cause of the jansenists, and in 1643 he published his treatise *De la fréquente Communion*, especially directed against the Jesuits. In 1655 a Jesuit confessor refused absolution to the duc de Liancourt unless he dismissed his jansenist chaplain and withdrew his granddaughter from Port Royal. Arnauld wrote the duke two letters upon this affair, one of them containing what is now the celebrated distinction *de jure* and *de facto*. The Sorbonne expelled Arnauld, who was defended by Pascal in his Provincial Letters. In 1679 he was compelled to flee to the Netherlands, and he died at Brussels.



BLAISE PASCAL (French, 1623-1662), great as a mathematician, as a philosopher, and as an author, was precocious, writing at 16 a treatise on conic sections that made Descartes incredulous. In 1648 he made experiments on atmospheric pressure that completed the work of Galileo and Torricelli. He made a calculating machine, and contributed to the infinitesimal calculus, the equilibrium of fluids, the mathematical theory of probability, and the properties of the cycloid. In 1652 his sister Jacqueline joined the Port Royalists, and in 1654 he threw himself with devotion into that cause, defending them in his 18 "Provincial Letters", which Voltaire declared to have the wit of Molière and the sublimity of Bossuet, while Gibbon says he learned from them to manage the weapon of grave and temperate irony even on subjects of ecclesiastical solemnity. His "Pensées" appeared in 1669.



MARIE de RABUTIN CHANTAL, MARQUISE de SÉVIGNÉ (French, 1626-1696), most charming and admirable woman of her time, received an excellent education, and after marriage in 1644 became one of the most prominent members of the circle of the Hôtel Rambouillet. After her daughter married the governor of Provence, she wrote the letters which though not intended for publication appeared after her death and made her famous, being of great historical interest and the highest literary merit. Her character is unsullied, for her heart was given entirely to her children, and her sweet and happy temper played lightly even with sorrow and sin. She was on intimate terms with the Port Royalists, and was a convert to the moral philosophy of Nicole. She lived to see her son and her grandson married, and died after nursing her daughter through a serious illness.



JACQUES BÉNIGNE BOSSUET (French, 1627-1704) while at the Jesuits college in Dijon was so thrilled with Hebrew poetry that he was often called "a man of one book" from his absorption in the Bible. In 1642 he was sent to Paris, and at 16 his attainments at the university were the talk of the town. At 24 he was made archdeacon of Metz, but was frequently called to Paris to preach, and in 1662 Louis XIV after hearing him wrote to felicitate his father upon having such a son. In 1670 he became preceptor to the dauphin, and resumed his own education the better to instruct his pupil, writing several books, the most noted one upon universal history. In 1670 he published his Exposition of Catholic doctrine. In 1681 he became bishop of Meaux, and drew up the decision of the assembly appointed to settle the disputes as to the power of the king and of the Pope. He is often quoted in regard to the Port Royal schools.



JOHN LOCKE (English, 1632-1704), long celebrated as a philosopher, has exerted wide influence on educational history through his "Thoughts concerning Education," and in a much smaller degree by his essay on "Studies." He thinks education consists in 1st, virtue; 2d, wisdom; 3d, good-breeding; and 4th and last, learning. "No but that I think learning a great help to well-disposed minds; but yet it must be confessed that in others not so disposed it helps them only to be more foolish or worse men." Wisdom is a blending of prudence, foresight, knowledge of the world, and ability in affairs, with an aversion to mere cunning. Locke strenuously objects to frequent resorts to the rod.* "In all the parts of education, most time and application is to be bestowed on that which is like to be of greatest consequence and frequentest use." It may be doubted whether we have yet reached the full application of his principles.†



BARUCH SPINOZA (Dutch, 1632-1677), the greatest modern expounder of pantheism, was of Hebrew parentage, but became a student of Descartes and in 1656 was excommunicated. For a time he supported himself by grinding lenses, refusing a professorship at Heidelberg, and a pension on condition that he should dedicate a work to Louis XIV, preferring to live on a pittance. His philosophy was a pure monism, in which the sole foundation is substance, and is mainly contained in his *Ethica*. His *De Intellectus Emendatione*, published posthumously, has been translated and is the most available brief summary of his philosophy. Its purpose is search for a joy which shall be permanent, and consequently the discovery of the highest good. "The reformation of intellectual procedure" is the first step and he distinguishes four classes of ideas, and eight properties of the intellect. Eternal truths are necessary truths.



SIR ISAAC NEWTON (English, 1642-1727) after graduation from Cambridge in 1665 was made fellow in 1667 and professor in 1669. From 1687 to 1690 he sat in parliament for Cambridge, being associated with John Locke. His greatest work was his discovery of the theory of gravitation, to which his attention was called by the fall of an apple in 1666, but the theory was not elaborated till 1685. From Kepler's laws he proved that the attraction of the sun upon the planets varies as the squares of their distances. His "Principia" was published in 1686-7, his method of fluxions in 1693, and his "Optics" in 1704. From 1703 till death he was president of the Royal Society. In 1696 he was made warden and in 1699 master of the mint, holding the place till death: the reformation of English coinage was largely his work. The reflecting telescope was devised by him, through disbelief in acromatic lenses.



ANOTHER PORTRAIT



GOTTFRIED WILHELM LEIBNITZ (German, 1646-1716), almost equally distinguished as philosopher, mathematician, and man of affairs, taught himself Latin and Greek in his father's library, studied law at Leipzig and Jena, and declined a professorship at Altdorf before he was 21. He became secretary of the Rosicrucians, but in 1667 entered politics in the service of the elector of Mainz, and visited Paris to advocate the conquest of Egypt. He was received there as author as well as diplomat, and through Huygens was stimulated to mathematical and physical discovery, becoming in 1673 F. R. S. of London, and discovering the differential and integral calculus. From 1676 to his death he was in the service of the duke of Brunswick-Lüneburg. For a time he strove to unite the Catholic and Protestant churches. In 1712 he was made a baron. His last years were devoted to his philosophical works, and he died neglected.



FRANÇOIS De SALIGNAC de LAMOTHE FENELON (French, 1651-1715), archbishop of Cambrai, was from 1675 to 1685 superior of a community founded for women converted from Protestantism, and wrote at this time his work "On the Education of Daughters". From 1689 to 1695 he was made tutor of the dauphin's son, the Duke of Burgundy, a boy of violent temper, yet warm-hearted and keen, over whom Fénelon acquired so beneficent an influence that his life would have been a blessing to France had he lived to reign. Fénelon became involved in a theological discussion of the doctrines of Molinos, and in 1699 was banished from court. The principles on which he based the young prince's education are embodied in his "Adventures of Telemachus," his "Fables," and his "Dialogues of the Dead", all of which had large circulation. Moral lessons he always inculcated by examples rather than by bald precepts.



JOHN BAPTIST DE LA SALLE (French, 1651-1719, founder of the Brothers of the Christian Schools, was ordained to the priesthood in 1671, and in 1682 chose as his life-work the education of the working-classes, and the teaching of poor boys. He took charge of schools that had been started in the different parishes of Rheims, and as the teachers increased secured a house for headquarters, established rules of poverty, chastity, and obedience, and chose a distinctive dress. In 1688 he established his system of schools in Paris, and in 1705 was called to Rouen where he made the headquarters of the order at St. Yon. Schools were soon established in all the principal cities of France. By 1702 there were 26 communities, and they have since extended throughout the world. At the Chicago Exposition their exhibit attracted much notice. Some of his text-books are still in use.



CHARLES ROLLIN (French, 1661-1741) became at 22 a master in the collège du Plessis, and was promoted until in 1694 he became rector of the university of Paris, after which he was made principal of the collège de Beauvais. In 1719 he was re-elected rector, but was disqualified and deprived of his other appointments because of his Jansenist principles. His "Ancient History" (1730-38) was long a famous text-book, and his "Treatise on Studies" (1726-31) is still a standard pedagogical authority. It contains a summary of what was then a reformed and innovating system, based on a use in study of the vernacular. He put little emphasis on Greek, but considered Latin essential, and proposed reforms in methods in the direction of Humanism. He also made much of history and natural science, proposing for the latter a series of practical object-lessons on much the basis afterward adopted by Pestalozzi.



AUGUST HERMAN FRANCKE (German, 1663-1727) was graduated from Leipzig in 1685, and in 1689 began to lecture there on the Bible. He was accused of pietism, and the lectures were forbidden. He went to Erfurt to preach, but in 1691 was banished from that town. Soon after he was made professor of Greek at Halle, and for 36 years was also pastor of the parish at Glaucha. In 1695 his plans for relief of destitute children matured into an institution for them supported by public charity. He began with a room, on a capital of seven guelders which he found in the poor box of his house. Within a year had purchased a house, and in 1697 added another house. In 1698 he had 100 orphans under his charge, and 500 day-scholars. At his death the institution included a training college, a Latin school, town schools with 110 teachers and 1734 children, etc. These schools now give instruction to 3500 children.



ANOTHER PORTRAIT



JEAN BERNOULLI (Swiss, 1667-1748) after graduation from Basle at 18 studied chemistry as well as mathematics, and in 1690 published an essay on fermentation, and in 1694 he took the degree of M.D. He became professor of mathematics at Groningen, where he also lectured on experimental physics. In 1705 he succeeded his brother James as professor of mathematics at Basle, where he remained till his death, 43 years later. Among his independent discoveries were the exponential calculus and the line of swiftest descent. He won several of the prizes offered by the Paris Academy on the laws of motion, the elliptical orbs of the planets, and the inclinations of the planetary orbits, but his most permanent contributions are his works on pure mathematics, to which D'Alembert declared he owed all he knew of the subject. He was keen in friendships but ardent in resentments.



CHRISTIAN WOLFF (German, 1679-1754) after education at Jena began in 1708 to lecture at Leipzig, and in 1706 became professor of mathematics at Halle. His ideal was to base theological truths on mathematical certitude, and he lectured in German instead of Latin. In 1723 he was removed from office and ordered to quit Prussian territory. He went to the university of Marburg, where he was received with distinction. More than 200 books and pamphlets appeared upon his expulsion, and his philosophy had almost undisputed sway in Germany until displaced by that of Kant. The king of Prussia made overtures to him to return, and in 1739 his philosophy was required of candidates for ecclesiastical preferment. In 1740 Frederick the Great recalled him to Halle, and in 1743 he became chancellor of the university; but he had lost the power of lecturing attractively, and his class-rooms were empty.



NICHOLAS SAUNDERSON [or SANDERSON] (English, 1682-1739), the blind professor of mathematics, lost in infancy not only his sight but his eyes, yet was a diligent student of the Pennington free school and at home, and in 1707 went to Cambridge. Through poverty he was unable to enter as a student, but he gave private instruction in physics and optics. In 1711 he received a degree and was made professor of mathematics. He invented a computing-board, described in his "Algebra" (1740), which also contains a portrait and a memoir. This work "is a model of careful exposition, and reminds one of the algebra which Euler dictated after having been overtaken by blindness". His "Method of Fluxions" (1751) is an elementary mathematical physics. He was remarkably successful as a lecturer, clear in statement and attractive in presentation. He was made a fellow of the Royal society.



GEORGE BERKELEY (English, 1685-1753) after graduation from Dublin in 1704 studied the new philosophical principles of Descartes and Locke and evolved the principle that no existence is conceivable which is not conscious. Perception and volition he considered operations of mind or spirit; no object exists apart from the mind. He expounded his theory in his "New Theory of Vision" (1709) and more fully in his "Principles of Human Knowledge" (1710), "Dialogues" (1713) and "De Motu" (1715), and its practical application in his "Discourse on Passive Obedience" (1711). He was a college tutor, 1707-1712, and a private tutor, 1715-1720. In 1721 he became divinity lecturer and university preacher at Dublin, and afterward became Hebrew lecturer and senior proctor. In 1728 he came to America to found a college in the Bermudas, but after three years gave up the project and returned to England.



SAMUEL JOHNSON (American, 1696-1772), first president of Columbia University, after graduation in 1714 from Yale taught school, and in 1716, when the college was removed to New Haven, was at first its sole tutor, with only 15 students. In 1719 he withdrew, but it was afterward through his influence that Bishop Berkeley made his gifts to the college. In 1720 he was ordained a Congregationalist. He became converted to the Episcopal form of church government, and in 1723 visited England, and on his return proceeded to organize the church of England in Connecticut, establishing a church at Stratford. In 1743 Oxford gave him the degree of D.D. In 1749 Benjamin Franklin visited him to offer him the presidency of the new academy, now the University of Pa., which he declined; but in 1754 he became president of King's college, now Columbia. In 1763 he retired to Stratford, on a pension of £50 a year.



HENRY HOME, LORD KAMES (Scotch, 1696-1782) became an advocate in 1723; published a volume of legal decisions in 1728; was made judge in 1732, and one of the lords of judiciary in 1763. In 1761 he succeeded through his wife to an estate in Perthshire, where he removed a stratum of peat on 1,500 acres of land by floating it into the river Forth. He was one of the founders of the Royal Society of Edinburgh. Besides his legal treatises he published in 1751 "Essays on the Principles of Morality and Natural Religion"; in 1761 "An Introduction to the Art of Thinking"; in 1762 "Elements of Criticism"; and in 1774 "Sketches of the History of Man". In his "Loose Hints on Education" (1781), published in his 85th year, he combats the doctrines recently promulgated by Rousseau. He considers chiefly the culture of the heart, and would have the child made acquainted early with the principles of revealed religion.



COLIN MACLAUREN (English, 1698-1746) on graduating from Glasgow at 16 had already shown remarkable mathematical genius, and in 1717 was elected professor of mathematics at Aberdeen. In 1719 he became a fellow of the Royal society, made the acquaintance of Newton, and published his *Organic Geometry*, inspired by Newton's discoveries as to conic sections. In 1722 he became a private tutor, but in 1775 was made professor of mathematics at Edinburgh. In 1740 he divided with Euler and Daniel Bernoulli the French academy prize on the flux and reflux of the sea; and his "Treatise on Fluxions" was published in 1742, in which he follows Newton in regarding fluxions as velocities, and announces the doctrine of the attraction of ellipsoids. Lagrange declared that this discovery could be compared with the greatest of those of Archimedes. His algebra was published after his death.



JONATHAN EDWARDS (American, 1703-1758), the most eminent of American metaphysicians, was the son of a man 60 years pastor of the same church, and after graduation from Yale at 17 studied theology for two years in New Haven, and was a tutor there 1724-1727. He then became colleague with his grandfather as pastor of the church at Northampton, Mass., and two years later the pastor. Here he became the acknowledged champion of the doctrine of endless punishment. In 1750 in consequence of a controversy over the suitability of certain books for reading, and the admission to communion of unconverted persons, he was dismissed from his pastorate, and was for a time a missionary to the Indians. In 1754 he published the book by which he is best known, "The Freedom of the Will." In January, 1758 he became president of what is now Princeton university, but died 34 days after his installation.



BENJAMIN FRANKLIN (American, 1706 1790), besides being one of the most famous American statesmen authors, and inventors, rendered great service to the cause of education. He founded the University of Pennsylvania, and also the American philosophical society. Dr. Wm. T. Harris says: "While Thomas Jefferson, with that breadth of statesmanship which characterizes all of his labors kept unceasingly before his view the importance of popular education, to re-inforce and make effective the operations of the principles of local self-government, on the other hand, Dr. Franklin, himself a noteworthy example of the self-educated man, kept in view the importance of education as the foundation of thrift and social development. These two men seem to have furnished more than any other two men the guiding principles which have prevailed in our civilization, political and social."



ANOTHER PORTRAIT



CARL von LINNÉ (Swedish, 1707-1778), better known under his earlier name of Carolus Linnaeus, began to be interested in plants when four years old, and became the greatest botanist of his time. In 1727 he went to the university at Lund, and in 1728 to Upsal, where in 1730 he began to lecture on botany. In 1732 he explored Lapland, and in 1733 Dalecarlia. In 1735 he went to Holland for a degree, in 1736 he visited England, and in 1738 began practice as a physician in Stockholm, and in 1740 became professor of botany at Upsal. His system of botany is founded on the sexes of plants, taking into account only a few marked characteristics, and serving only as an index to the book of nature. It was first published in Leyden in 1735. His "Genera Plantarum" (1737) is the starting point of modern systematic botany. His most important work is "Species Plantarum" (1753). "He found biology a chaos, he left it a cosmos."



LEONHART EULER (Swiss, 1707-1783) after graduation from Basle in 1723 continued his favorite study of geometry, to which he added physiology. In 1727 he went to St. Petersburg, where in 1730 he became professor of physics and in 1733 of mathematics, succeeding Daniel Bernoulli. Here he carried the integral calculus to higher perfection, and invented the calculation of sines. In 1735 he solved in three days a problem for which other mathematicians had demanded months. In 1741 he became professor of mathematics at Berlin, but returned to Russia in 1766. Nearly losing his sight, he dictated his "Elements of Algebra" to his servant, who knew nothing of mathematics. He won both prizes of the French Academy for the theory of the moon's motion, although he had to carry the intricate calculations in his memory. In 7 years he contributed to the St. Petersburg Academy more than 70 memoirs.



THOMAS DILWORTH (English, 1710?-1780), the text-book author, was for some time assistant to a schoolmaster named Dycke, at Stratford-on-Bowe, and then started a school of his own at Wapping. In 1740 he published "Dilworth's Spelling Book, or New Guide to the English Tongue", which came into general use, in many cases succeeding the "horn-book". It was used to teach the alphabet, spelling, reading, and grammar, and was in small type, with a portrait of the author. When in 1784 Webster's spelling book began to displace Dilworth's in America, "Dilworth's Ghost" was written to deter teachers from making the change. In 1743 he published his "Schoolmaster's Assistant, being a compendium of arithmetic, both practical and theoretical", which was for a time used almost universally in American schools, and may still be occasionally found in shelves of old schoolbooks.



JOHN LOVELL (American, 1710-1778) after graduation from Harvard in 1728 became in 1730 assistant in the Public Latin school, Boston. In 1733 he became headmaster, and continued so 42 years. Though in many respects an excellent teacher he was stern and rough, and his pupils feared him as they would a lion. In 1742 he delivered the first public address in Faneuil hall, at the town hall meeting called on the decease of Peter Faneuil. When the Revolution came he was a loyalist, and when news arrived of the battle of Lexington he dismissed the school, saying: "War's begun—school's done." He went to Halifax with the British troops and died there. In his day school began at 7, closed at 11, and began again at 1, while at 9 the scholars went to another school to learn to write and cipher, which it was beneath the dignity of his school to teach. He had a garden in which he allowed the boys as a reward of merit to work for him.



DAVID HUME (English, 1711-1776), "the most subtle metaphysician and one of the greatest historians and political economists of Great Britain," studied at the university of Edinburgh and resolutely devoted himself to a literary life. From 1734 to 1737 he studied in France, and in 1739 began publishing his "Treatise of Human Nature", which, he says, "fell dead-born from the press." In 1741 his "Essays" proved more successful. In 1744 he sought unsuccessfully the chair of moral philosophy at Edinburgh, and in 1751 that of logic at Glasgow. In 1748 his "Philosophical Essays" appeared and in 1751 his popular "Political Discourses", and "Inquiry concerning the Principles of Morals". In 1753 he began his "History of England", and in 1757 published "Four Dissertations", in which he argues that polytheism is the natural religion. In 1769 he quarrelled with Rousseau, whom he had befriended. His later years were prosperous.



ANOTHER PORTRAIT



ELEAZAR WHEELOCK (American, 1711-1779), founder and 1st president of Dartmouth college, after graduation from Yale in 1733 preached at Lebanon, Conn., and became convinced that as his salary provided but half his support, he ought to give half his time to educating the Indians. In 1754 he took two Indian boys into his family, and in 1755 "Moor's Indian charity school" was established there. Various gifts were secured, and in 1765 some \$50,000 was raised in England, under charge of a board of trustees with the earl of Dartmouth at the head. In 1770 the school was removed to Hanover, N. H., with 30 pupils, and became Dartmouth college, Mr. Wheelock being the first president. His accounts of the school from the beginning were published in 9 pamphlets (1763-75). Among the Indians he instructed was Thyandagea (Joseph Brant), who afterward sent his son to Dartmouth.



JEAN JACQUES ROUSSEAU (Swiss, 1712-1778), was the most extravagant, the most eloquent, the most reckless of all innovators.* "Take the road directly opposite to that in use and you will almost always go right," was his fundamental maxim. His "*Emile*" is perhaps the most influential book ever written on the subject of education. The school to which he belonged may be said to have been founded by Montaigne, and to have met with a champion in Locke. But it was reserved for Rousseau to give this theory complete development, and to expound it in the clearest and most eloquent language. In the *Emile* he made the first noteworthy study of child-nature from a pedagogic standpoint; emphasized the importance of training the senses and bodily capabilities; and was the first to treat adequately the education of girls. He gives directions for teaching geography, etc., from the standpoint of the child's experience.



ANOTHER PORTRAIT



CHARLES MICHEL ABBÉ de l'ÉPÉE (French, 1712-1789), upon whose labors the present system of deaf-mute instruction is based, studied for the priesthood, but on account of his Jansenist tendencies was deprived of his church functions. He undertook the instruction of two deaf-mutes, and invented the manual alphabet by which he taught them to converse. He was entirely uninformed of Pereira's efforts in the same direction, so that his invention was independent of suggestions from others. In 1755 he founded a school for the instruction of deaf-mutes, which he maintained at his own expense till his death, and which was succeeded by a national institution founded in 1791 by the National assembly. He published various books upon his methods, the principal one in 1784. An estimate of them may be found in Hartmann's "Deafmutism", of which a translation appeared in 1881.



ALEXIS CLAUDE CLAIRAUT (French, 1713-1765) was the son of a teacher of mathematics in Paris, and at 12 read before the French Academy an account of four curves he had discovered. At 16 he finished his treatise on curves of double curvature, and at 18 was admitted to the academy. In 1736 he joined Maupertuis in the expedition to Lapland to estimate a degree of the meridian, and on his return published his treatise on the form of the earth, promulgating a theory on the variation of gravity afterward corrected by Airy. He obtained an ingenious approximate solution of the problem of the three bodies, and in 1750 gained the St. Petersburg prize for his treatise on the lunar theory. In 1759 he calculated the perihelion of Halley's comet. He explained in 1747 the motion of the lunar apogee, a point left unexplained by Newton, applying his solution of the problem of the three bodies.



JEAN LE ROND D'ALEMBERT (French, 1717-1783) was educated at the Mazarin college, where the Jansenists in seeking to direct his attention to theology gave him so little instruction in mathematics that he afterwards wasted much time in discovering for himself what had already been established. After submitting several mathematical papers to the Academy of Sciences he was in 1741 made a member, and in 1743 established his principle of dynamics that if from the forces acting on a connected system of bodies there be subtracted the forces which, acting alone, would be capable of producing the actual accelerations and retardations of the bodies, the remainder must exactly balance each other. In 1746 he received the Berlin gold medal for a new calculus, and he refused flattering offers to settle in Germany and Russia. He assisted Diderot in preparing the *Dictionnaire Encyclopédique*.



CHRISTIAN FURCHTEGOTT GELLERT (German, 1715-1769) was educated at Leipzig, and from 1851 to his death was professor of philosophy there. He lectured on poetry, eloquence, and morals to large and enthusiastic audiences. The German literature of the period was dominated by Gottsched. Gellert was one of a body of young men who resolved to free themselves from such trammels, and who started the revolution which was consummated by Schiller and Goethe. Of his writings, the best are his "Fables" and his "Songs", the latter expressing the maxims of a liberal piety and still popular in Germany. His influence was due still more to the excellence of his personal character, his gentle piety, and his singular knack of gaining the reverence and love of young people. He was beloved by his students, and they carried his teachings all over Germany. Editions of his works were published in 1769-74, and in 1867.



JOHN WITHERSPOON (Scotch-American, 1722-1794), a lineal descendant of John Knox, after education at the university of Edinburgh, and preaching at Beith and Paisley, became in 1768 sixth president of what is now Princeton university. He at once inspired it with new life, broadened its course of study, and secured increased financial support. He was also prominent in the councils of the Revolution. He was a signer of the Declaration of Independence, a member of the New Jersey constitutional convention and provincial congress in 1776, and a member of the Continental congress from 1776 to 1782. He was always firm in the most gloomy aspects of public affairs, and discovered great presence of mind under the most embarrassing conditions. In 1779 he resigned his house on the college grounds to the vice-president, but in 1783 he visited Europe, and to the last performed his functions as president.



JOHANN BERNHARD BASEDOW (German, 1728-1790), became famous through his *Philanthropium* at Dessau, founded on the ideas of Rousseau, with the key-note "Everything according to nature." There was much teaching by guessing and other games, the pupils sometimes throwing dice to see who should recite next. They had 8 hours for sleep, 8 for food and amusement, 8 for school-work and manual labor. The development of the body was especially cared for, gymnastics being introduced into modern schools for the first time. But it did not succeed, and was closed in 1793. Basedow proved an unfit man to be at its head, and did not continue long in charge, thereafter teaching privately. His "*Elementarbuch*" gave information in the form of dialogues, interspersed with tales and easy poetry, and his "*Methodenbuch*" was a companion volume for parents and teachers.



ANOTHER PORTRAIT



ADAM SMITH (Scotch, 1723-1790), the great political economist, after education at Glasgow, in 1751 became professor of logic, and in 1752 of moral philosophy at Glasgow. His "Theory of Moral Sentiments" (1759) gave him wide reputation, and he issued in 1776 "An Inquiry into the Nature and Sources of the Wealth of Nations", which made him the father of modern political economy. It demonstrates that to advance a people to greatness every man should be permitted so long as he observes the rules of justice to pursue his own interest in his own way, and to bring both his industry and his capital into the freest competition with those of his fellow citizens. He lived in London, 1776-78, and then removed to Edinburgh as commissioner of customs for Scotland, where he remained till death. In 1787 he was elected lord rector of the University of Glasgow. A posthumous volume of essays appeared in 1785.



IMMANUEL KANT (German, 1724-1804) was through life a professor in the university of Königsburg from which he was graduated, never once leaving the city during the thirty years he taught there. The central point of his philosophy is that before anything can be determined concerning the objects of cognition, the faculty of cognition and the sources of knowledge lying therein must first be examined. He also gave lectures on pedagogy. He believed that behind education lies hidden the great secret of the perfection of human nature, and that education is made up of discipline, cultivation, and the attainment of prudence and morality. The chief interest centres in character-development, which he terms *practical* education; and the great problem is how to combine subjection to legal authority with the proper use of individual freedom. His views on moral education anticipate Herbert Spencer's.



WILLIAM SAMUEL JOHNSON (American, 1727-1819), president of Columbia University and son of the first president, after graduation from Yale in 1744 studied law and rose to eminence in that profession. In 1761 and 1765 he was elected to the Connecticut general assembly, and in 1765 to the upper house, where he was a guiding spirit in opposition to the stamp tax, and from 1766 to 1771 he was in England as special agent from the assembly. During the war he was sent to plead with the British officers not to destroy the town of Stratford, when he was arrested and paroled; but after peace was declared he resumed his place in the upper house. In 1787 he was made the first president of Columbia college under the new charter. He was elected first U. S. senator from Connecticut, but resigned and from 1793 to his resignation in 1800 devoted himself to the college, spending the rest of his life in literary leisure at Stratford.



EZRA STILES (American, 1727-1795) studied Latin at 9, was ready for college at 12, and entered Yale at 15, was graduated in 1748, became tutor in 1749, was admitted to the bar in 1753, but in 1755 became pastor of a church in Newport, R. I. He conducted the first electrical experiments in New England, and was a personal friend of Dr. Franklin, who sent him a thermometer, his observations of which he recorded daily till his death. He was also interested in silkculture. In 1778 he became president of Yale, having insisted upon some modifications of the religious requirements and upon more cordial relations with the State authorities. He gave much of the instruction in mathematics and the sciences, as well as in mental and moral philosophy and ecclesiastical history. During the revolutionary war the college lost ground, depending chiefly upon clergymen for support. In 1792 the legislature made its first grant to the college.



JOSEPH PRIESTLEY (English, 1733-1804) was a clergyman. But in 1758 he also established a private school and from 1761 to 1767 was tutor in an academy at Warrington. He was especially interested in natural science, he met Franklin in London, and in 1767 he published his "History of Electricity". His experiments with the carbonic acid produced in a brewery led to the discovery of oxygen, announced in 1774, followed by the preparation of nitric and nitrous oxides, hydrochloric acid, etc., which did much to erect chemistry into a science, though his doctrine of phlogiston was long ago discarded. In 1780 he began to preach in Birmingham, but because he sided with the French revolutionists in 1791 his home and chapel were burned by a mob. In 1794 he came to America, and spent the rest of his life in Northumberland, Pa. He published altogether 130 volumes. Though called a materialist, he believed in the immortality of the soul.



JOSEPH LOUIS LAGRANGE (Italian, 1736-1813) a mathematician of the first rank, while at college in Turin read an essay by Halley that roused his enthusiasm for the analytical method in mathematics, and at 19 made known to Euler his calculus of variations. In 1754 he was made professor in the royal school of artillery, and in 1759 published his theory of sound. In 1762 he published his "method of variations", and from 1764 to 1788 took the five prizes offered by the Paris Academy of Sciences. In 1766 he succeeded Euler as director of the mathematical department of the Berlin academy. In 1788 he published his "Analytical Mechanics" at Paris, whether he had removed in 1787, and aided in the establishment of the metric system. He became professor of mathematics in the Polytechnic school, and was placed at the head of the geometry section of the Institute. He was buried at the Pantheon, Laplace delivering the funeral oration.



HYLES COOPER (English, 1737-1785), 2d president of Columbia university, after graduation in 1760 from Queens college, Oxford, became in 1762 professor of moral philosophy and assistant to the president of Kings college, now Columbia university, and within the year became president at the early age of 26. At first his popularity was great. He was a wit and a scholar, and won the students by occasionally laying aside his dignity. He secured gifts from Oxford university, and in 1771 visited England in behalf of the college. As the revolution approached, however, he became active as a high church tory, and his pamphlets soon made him the most thoroughly hated man in America. In 1775, warned that a mob was to attack the college, he jumped over the college fence and spent all night wandering along the Hudson river, and the next day escaped to England. He was afterward a clergyman in England and Scotland.



JAMES MANNING (American, 1738-1791), the first president of Brown University, after graduation from Princeton in 1762, while preaching at Warren, R. I., opened in 1763 a Latin school. In 1765 he was elected president of the Rhode Island College, proposed and established largely through his efforts, and began to give collegiate instruction at Warren. In 1770 the college was moved to Providence, where he served also as pastor of the First Baptist church. From 1776 to 1783 the college was suspended, as the building was used for a barrack and a hospital. In 1786 he was elected to Congress. He was of commanding and pleasing appearance and winning manners, and depended for college discipline rather upon parental persuasion than upon official authority. Nicholas Brown, whose name the university now bears, was one of his students, and gave to one of the buildings he erected the name "Manning Hall".



SIR WILLIAM HERSCHEL (German, 1738-1822) was in early life a musician, and in 1757 settled in England as an organist and music teacher, becoming in 1766 organist at Bath. But he was a scientific student, and, aided by his brother and his sister, began to make telescopes for his own use, in 1774 completing one of 6 feet, and in 1789 one of 40 feet focal length. In 1780 his observations began to be communicated to the Royal Society, in 1781 he discovered Uranus. In 1783 he showed the motion of the solar system in space, and from 1784 to 1818 he showed the position of the sun. In 1793 he proved that the terrestrial laws of gravitation applied to the most distant stars. In 1782 he became private astronomer to the king, which enabled him to devote himself to science. He published catalogues of double stars, nebulae, etc., and tables of comparative brightness. He also made researches in light and heat.



MRS. SARAH KIRBY TRIMMER (English, 1741-1810) was the daughter of the drawing teacher of King George III, and as a child knew Dr. Johnson, Hogarth, Gainsborough, Sir Joshua Reynolds, and their social set in London. She married at 21, and had 12 children, whose education she herself directed. She had also much to do in placing governesses in private families, and in 1780 began her "Easy Introduction to the Knowledge of Nature", in which she gave her own plan of home instruction. This was followed by selections from "Sacred History" with annotations and reflections: "The Economy of Charity" (1787), "The Servant's Friend", "A Comparative View of the New Plan of Education" (1803), various illustrated histories, "A Little Spelling-Book", and other small books of natural history, etc. She also published "The Family Magazine", "The Guardian of Education", and an "Essay upon Christian Education".



JEAN FREDERIC OBERLIN (French, 1740-1826) in 1766 became pastor at Waldbach, Alsace, and set himself to bettering the physical condition of his flock. He began by constructing roads, erecting bridges, and introducing improved methods of agriculture, till comfort took the place of poverty and indolence. At the close of his 60 years labor, the population had increased from 500 to 5000. He founded an itinerant library, established village schools, and started the first infant schools known. This last was his distinctive educational work. In these infant schools, then termed asylums and more like the French *crèches* than our kindergartens, he gathered the children for instruction and recreation while their parents were at labor. Primarily his intention was to leave the parents free to work, but the plan soon developed into training of the children, till that became an end, and great good was accomplished.



SAMUEL KIRKLAND (American, 1741-1808), founder of Hamilton college, was a student at Eleazar Wheelock's school for Indians at Lebanon, and devoted himself to their evangelization. Before his graduation from Princeton in 1765 he had begun his work in central New York among the Oneidas. He lived with them and made his life a long sacrifice for them. He married a niece of Dr. Wheelock, who accompanied him in his work. In 1788 the Oneidas and the State conjointly gave him 4750 acres of land, and on this he set out to found an institution open to Indians and whites that might perpetuate his work. He gave it one-eighth of his grant, and interested others in the project. He got from Alexander Hamilton a gift of land, and for Hamilton the school was named. A charter was granted in 1793, and instruction began in 1798. In 1812 it received a college charter.



JOHANN KASPAR LAVATER (Swiss, 1741-1801) though best known for his work on physiognomy was a preacher, a theological writer, a poet, and a friend of Goethe, from whom however he afterward became estranged. When Zürich was taken by the French in 1799, while trying to appease the soldiery he was shot through the body, and died after long suffering. In his "Wahrung und Dichtung" Goethe draws an amusing contrast between Lavater and Basedow (see Quick's "Educational Reformers", pp. 186, 187), much to the disadvantage of Basedow. He says: "As the lines of Lavater's countenance were free and open to the beholder, so were Basedow's contracted, and as it were drawn inward. Lavater's eye clear and benign, under a very wide lid; Basedow's on the other hand, deep in his head, small, black, sharp, gleaming out from under shaggy eyebrows, whilst Lavater's were under two arches of soft brown hair."



THOMAS JEFFERSON (American, 1743-1826) was an educator as well as a statesman. He was educated at William and Mary's college. In 1778 he presented an educational bill for Virginia, said to have been the suggestion for the school system adopted in Germany under von Humboldt, with whom he had intimate correspondence. He proposed an amendment to the national constitution by which the national government should coöperate with the States in educational work. Throughout his administration as president he favored every bill that made grants for education, especially that giving section 16 of every township for the support of common schools. In 1817 he proposed compulsory education for Virginia. The nucleus of the present congressional library is the gift of 6,700 books from his own library. After his retirement from public life in 1809 he devoted himself largely to the establishment of the University of Virginia.



ANTOINE LAURENT LAVOISIER (French, 1743-1794), the discoverer of oxygen, after graduation from the Collège Mazarin, Paris, devoted himself to science with such zeal that when preparing the essay which won him in 1766 his first prize, on the best mode of lighting the streets of Paris, in order to render his eyes more sensitive he shut himself up for six weeks in a room hung with black and lit only by the lamps he was experimenting upon. He assisted in preparing a geological map of France, and in 1770 began investigation of the air. In 1778 he gave to what Priestley had called "dephlogisticated air" the name of oxygen, and in 1778 published his "*Méthode de nomenclature chimique*", which supplanted the alchemistic jargon prevailing. His "*Traité élémentaire de chimie*" (1789) dealt the final blow to phlogiston, and established the science of modern chemistry. In 1794 as ex-farmer-general he was beheaded.



JEAN ANTOINE NICOLAS de CARITAT CONDORCET (French, 1743-1794), mathematician and philosopher, after study at the college of Navarre by an essay on the integral calculus gained a seat in the academy of sciences, and in 1777 became secretary. In the same year his theory of comets gained a prize in the Berlin academy. At the revolution he was elected to the legislative assembly, of which in 1772 he was president. In the national convention he sided with the Girondists and in 1793 was outlawed. While in hiding he wrote his most remarkable work, "*Esquisse des Progres de l'Esprit Humain*". Having left his hiding place he was imprisoned and the next morning was found dead on the floor, probably having poisoned himself. His collected works were published in 21 volumes in 1804. He treated all problems in mathematics with ease and with ingenuity, but was stronger in suggestion than in demonstration.



ANDREW DALZELL (Scotch, 1743-1806) after graduation from Edinburgh in 1773 became Greek professor there by what was then the common practice of paying the present incumbent \$1500 for his place. He at once infused new life into what had been a neglected study, so that in 1784 it brought him an income of \$2000. In 1785 he published his first textbook, "*Collectanea Graeca*", followed in 1797 by a similar volume of poetical selections. His "*Analecta majora*" and "*Analecta minora*" also came into wide use. In the contest where Jacob Bryant denied the existence of Troy and Bentley and Wolf the existence of Homer, he stood by Homer and his story. He was librarian of the university, and wrote a history of it in two volumes. Lord Cockburn says he was "mild, affectionate, simple, an absolute enthusiast about learning,"—not a good instructor, but a great exciter of boys' minds.



RICHARD LOVELL EDGEWORTH (English, 1744-1817) while still at Oxford made a run-away match, and went to live in Berkshire. He tried to bring up his son after the principles laid down in Rousseau's *Emile*, but afterward doubted many of Rousseau's views. He formed a friendship with Thomas Day, who at his suggestion wrote "*Sanford and Merton*". In 1782 he settled down upon his estate in Ireland, where in 1794 he offered to establish a telegraph system of his own invention, which was put into operation in 1802. In 1798 "*Practical Education*" was published under joint authorship with his daughter Maria, a literary partnership that continued for many years. In 1806 he was made one of the commissioners to inquire into Irish education, and his "*Professional Education*" appeared in 1808. His biography was written by himself up to 1788, and concluded by his daughter.



HANNAH MORE (1745-1833), made three reputations: (1) as a clever verse-writer and converser in the circle of Johnson, Reynolds, and Garrick; (2) as an animated writer on moral and religious subjects on the Puritanic side; (3) as a practical philanthropist. She was the daughter of a schoolmaster, and in 1767, with her four sisters established a boarding-school at Bristol. An annuity from a wealthy admirer set her free for literary pursuits. Her "Strictures on Female Education" was published in 1799. The tone is animated, the writing fresh and vivacious, with an originality and force in her way of putting commonplace sober sense that accounts for her extraordinary popularity. In her serene old age philanthropists from all parts of the world made pilgrimages to see the bright and amiable old lady. She retained all her faculties till past the age of 85, and died universally lamented.



LINDLEY MURRAY (American, 1745-1826), the grammarian, was the son of a Quaker merchant, and became a successful lawyer in New York city. He retired in 1784 and settled in England, where he devoted himself to literary pursuits. He is best known by his "English Grammar" (1795), for many years the standard authority, especially in England, and in 1816 he issued a new edition, of an abridgment of which (1818) more than a million copies were sold. It was embossed for the blind, and translated at Bombay into an Indian dialect. He published an "English Reader" (1799), a "Spelling Book" (1804) that reached 44 editions, and other text-books, besides an autobiography, and some religious and philanthropical works. His library became noted for its theological and philological treasures. He studied botany, and his garden was said to exceed in variety the royal gardens at Kew.



JOHANN HEINRICH PESTALOZZI (Swiss, 1746-1827), known as the founder of "object-teaching," is the most celebrated of educational reformers. He was a lonely child, and grew up with excitable feelings and a lively imagination which prevented circumspection and forethought. He failed as a clergyman, failed as a farmer, and failed as a schoolmaster, but was unexpectedly successful as an author, his "Leonard and Gertrude" (1781) making him famous, afterward followed by "How Gertrude teaches her Children." After the French revolution, his friends came into power, and asked him what post he would accept. He replied, "I want to be a schoolmaster." So in 1798 he was sent to Stanz to care for orphan children, removing in 1799 to Burgdorf, and in 1805 to Yverdon, where his school gained a European reputation. Pupils flocked to it, and its fame attracted many distinguished visitors. Read his life by DeGuimps (\$1.50).



PORTRAIT FROM BIBER'S LIFE



ANOTHER PORTRAIT



GASPARD MONGE (French, 1746-1818), the inventor of descriptive geometry, after education at Beaune, Lyons, and at the military school in Mézières became professor at the latter in 1768 of mathematics and in 1771 of physics. In 1778 he got the chair of hydraulics at the Lyceum in Paris, whither he moved in 1783, and was appointed examiner of naval candidates. In 1781 he published his discovery of the curves of curvature of a surface, which in 1795 he applied to the ellipsoid. In 1792-3 he was for a time minister of the marine, and was active in the national defence, and in the establishment of the Normal and Polytechnic schools, at each of which he was professor of descriptive geometry. In 1796 he was sent to Italy, and later to Egypt and Syria. He became president of the Egyptian Commission. He was in the senate with the title of Count, when the fall of Napoleon took away all his political honors.



STEPHANIE FELICITE DUCREST de SAINT AUBIN, COMTESSE de GENLIS (French, 1746-1830) was married at 16, and at 24 became governess at the Palais Royal to the daughters of the duchess of Chartres, and in 1781 to the sons of the duke of Orleans, one of them afterward King Louis Philippe, which led to the resignation of all their tutors. The better to carry out her theory of education she wrote several works, the best known of which is the "Theatre of Education" (1779-80). The fall of the Girondins in 1793 compelled her to take refuge in Switzerland. In 1794 she went to Berlin, but was expelled, and settled in Hamburg, where she supported herself by writing and painting. In 1799 she returned to France and was received with favor by Napoleon, who gave her a pension of \$1,200 a year. She continued her writings, which though hasty form good material for historians.



PIERRE SIMON MARQUIS de LAPLACE (French, 1749-1827), the Newton of France, after education at the military school of Beaumont became a teacher there, and at 18 came to Paris, where a letter to D'Alembert made him professor in the *École Militaire*. In 1773 he announced the invariability of planetary mean motions, the most important step in the establishment of the stability of the solar system. This was followed by profound investigations by him and by Lagrange, communicated to the Academy of Sciences in 1787. His "*Mécanique Céleste*" (1799) collected in a single work the development and application of the law of gravitation by three generations of illustrious mathematicians. His "*Exposition du Système du Monde*" (1796) gave the same conclusions in style so lucid that in 1816 he was elected to the French Academy. It is in this volume that he announces his nebular hypothesis.



ADRIEN MARIE LEGENDRE (French, 1752-1833), in the front rank of the several great French mathematicians of his time, after graduation from the Collège Mazarin became professor in the *École Militaire* and afterward in the *École Normale*. In 1792 he received the Berlin academy prize for a memoir relating to the paths of projectiles. He was a member of the commission for connecting Paris and Greenwich geodetically, and of the council to introduce the decimal system of weights and measures and determine the length of the metre. His researches on elliptic functions covered 40 years, yet when in 1827 the discoveries of two young and yet unknown mathematicians revolutionized the subject, he readily and cheerfully accepted them. His name is most widely known through his "*Elements of Geometry*," the first successful attempt to supersede Euclid, and long a favorite text-book in England and America.



JOACHIM HEINRICH CAMPE (German, 1746-1816) studied theology at Halle, and after acting for a time as chaplain at Potsdam, in 1777 replaced Basedow as director of studies at the Philanthropin at Dessau. Soon after he set up a similar establishment of his own at Tittow, near Hamburg, but was obliged to give it up on account of ill-health. In 1787 he became counsellor of education at Brunswick, and purchased a school-publishing business, which became very prosperous. He published the "Kleine Bibliothek", 12 vols., "Sämmtliche Kinder- und Jugendschriften", 37 vols., etc. His "Robinson der Jüngere", known in English as "The Swiss Family Robinson", was translated into nearly every European language. His theoretical works on education were also influential, including his "General Revision of the School System" (1785-91) in 16 volumes. His biography by Leyser was published in 1877.



STEPHEN GIRARD (French, 1750-1831), founder of Girard college, was a sailor at 13 and a captain at 23. In 1777 he gave up the sea and settled in Philadelphia as a merchant. When yellow fever broke out, sweeping away a sixth of the population, he became manager of the hospital, and devoted himself to the care of the sick and the dead, and assisted the sufferers with money and provisions. From this time his financial success was remarkable. On the dissolution of the United States bank he founded the Girard bank, and during the war of 1812 assisted the government at a critical period by subscribing to a large loan. He left his $7\frac{1}{2}$ millions to charity, most of it for founding the Girard college for orphans. He required that they should be instructed in the purest principles of morality, with a love for truth, sobriety, and industry; but to prevent sectarian instruction he forbade that clergymen should enter the grounds,



TIMOTHY DWIGHT (American, 1752-1817) was a grandson of Jonathan Edwards, and was graduated from Yale in 1769. After two years in a New Haven grammar school he became in 1771 a tutor, which he remained till in 1777 he was licensed as a preacher and became an army chaplain. In 1778 he retired to his farm in Northampton, serving two terms in the Massachusetts legislature. In 1783 he was ordained at Greenfield, where he opened an academy that drew students from all over the country. In 1795 he was made president of Yale. At that time the college was a feeble institution with 110 students and only four instructors, but under him it grew toward real university life, and recovered the prestige it had lost. His principal works were "Theology Explained and Defended" (1816), "Travels in New England and New York" (1821). He also wrote the "Conquest of Canaan" (1774), an ambitious epic poem.



ANDREW BELL (Scotch, 1753-1832) after graduation from St. Andrews served as tutor six years in Virginia and six more in Scotland. In 1787 he sailed for India, and became superintendent of the orphan asylum at Madras. He could not get satisfactory teachers, and hit upon the plan of making one pupil teach the others, the "monitorial" system. In 1796 he returned to England with a reputation and \$130,000 in his pocket, and published "An Experiment in Education", a report of what he had done. In 1805 Joseph Lancaster came to see him, and they became enemies. The National Society was formed to support Dr. Bell's methods, and the British and Foreign School Society to support Lancaster's. Dr. Bell became prebendary of Westminster Abbey, and is buried there. He left his estate of a million dollars to educational uses, and founded the chairs of education at Edinburgh and St. Andrews.



AUGUST HERMANN NIEMEYER (German, 1754-1828), a great grandson of Francke, after being professor of theology at Halle, was in 1785 made a director; and upon the establishment of a teachers' seminary in 1787 was placed at the head of it. The institution was closed by Napoleon, and when opened again through his efforts in 1807, he was made chancellor, which position he held for nine years. His "Principles of Education and Instruction" (1799) was the first attempt at systematizing German pedagogy, and one of the earliest attempts at a history of education. He regarded the harmonious development of the faculties as the first principle of education. The book grew to three volumes, and he himself edited eight editions of it. It is still regarded as among the best German authorities. In 1816 he was made a member of the consistory at Magdeburg.



ANTOINE ISAAC SILVESTRE, BARON de SACY (French, 1758-1838), greatest of French orientalists and founder of the modern school of Arabic scholarship, was educated in seclusion at his home in Paris. He became in 1781 counsellor and in 1791 commissary-general in the *cour des monnaies*. In 1792 he retired from public service, and devoted himself to the oriental studies to which he had already given a great deal of time. In 1795 he was made professor of Arabic in the newly founded school of living Eastern languages. His Arabic text-books proved him to be a great teacher as well as a profound scholar. In 1806 he became professor also of Persian. In 1808 he entered the *corps législatif*, and in 1832 was made a baron. In 1815 he became rector of the University of Paris, and after the second restoration was active in the commission of public instruction. With all this varied work he was always fond of society.



RICHARD PORSON (English, 1759-1808), the greatest of modern Greek scholars, after graduation from Cambridge in 1782 was elected fellow of Trinity, and in 1783 began publishing critical reviews, and in 1786 helped to edit an edition of the *Anabasis*. By 1790 he had become known as a scholar of the first rank, and his letters on a spurious verse in 1st John were pronounced by Gibbon the most acute and accurate piece of criticism since the days of Bentley. In 1792 he lost his fellowship because unwilling to become a clergyman, and his friends raised funds to provide an annuity of \$500 a year. He lived in London, and delighted to gather young men about him and pour forth from his marvellous memory torrents of every kind of literature. In 1792 he became Greek professor at Cambridge, but the income was only \$200; and in 1806 was made librarian of the London Institution, which brought him \$1,000 a year more.



JOHANN GOTTLIEB FICHTE (German, 1762-1814) after a youth of study at the universities, supporting himself by teaching and literary work, in 1790 became acquainted with Kant's philosophy, and wrote his "Critique of Revelation", which by the publisher's error was ascribed to Kant himself, thus bringing fame to Fichte. In 1794 he became professor of philosophy at Jena, where his success was instantaneous. His essays here on moral subjects are well-known in English under the title "The Vocation of the Scholar". In 1799 he was accused of atheism and obliged to resign, residing till 1806 in Berlin, giving lectures in 1805 at Erlangen, and publishing his "Nature of the Scholar". The disasters of war drove him away, but in 1807 he returned, and delivered his "Addresses to the German nation" enunciating a theory of state-education, based on the principles of Pestalozzi. From 1810-1812 he was rector of the new university.



JOHANN PAUL FRIEDERICH RICHTER (German, 1763-1825), often referred to as "Jean Paul," came of a race of pedagogues, both his father and grandfather having been schoolmasters. He was himself a teacher, starting in 1789 a school of seven scholars. He was much loved by his pupils, seeking not to instill knowledge but to evoke faculty; to teach, not to preach. He gathered here the ideas for his "*Levana*," the German representative of "*Emile*." Richter, like Rousseau, is a sentimentalist, and approaches the problem of education from the emotional rather than the intellectual side, but Richter repudiates Rousseau's careful system. "*Levana*" is a mighty maze, without a plan, yet with fixed ideas and principles, and a safer guide than "*Emile*." To educate by illusions and carefully prepared accidents is futile, he says, for sooner or later the boy will discover the deception.†



JAMES KENT (American, (1763-1847), professor of law in Columbia college, after graduation from Yale in 1781 practised law in Poughkeepsie, N. Y. In 1793 he removed to New York, and was made master in chancery. In 1797 he became recorder, in 1798 judge of the supreme court, in 1804 chief justice, and in 1814 chancellor. Up to this time chancery law had been unpopular, and no decisions had been published. His judgments (Johnson's Chancery reports, 1816-24) cover a wide range of topics, and are so thoroughly considered and developed as unquestionably to form the basis of American equity jurisprudence. In 1823 he resigned, and returned to the chair of law in Columbia, to which chair he had been elected in 1796. Out of his lectures grew his "Commentaries on American Law" (1826-30), which won for him a high and permanent place among jurists. He was a man of great purity of character, simple and gentle.



STEPHEN VAN RENSSELAER (American, 1764-1839), became an army officer in 1786, and major-general of cavalry in 1801. He was elected in 1789 to the assembly and in 1790 to the senate, where he remained till in 1795 he was elected lieutenant-governor. In 1810 he was appointed upon the canal commission, and in 1816 was once more appointed, serving till 1824. In the war of 1812 he was placed in command of the militia of New York, and on Oct. 13 planted the flag on the heights of Queens-town. In 1819 he was elected regent of the University, and in 1821 to the constitutional convention. In 1820 he was president of the board of agriculture, and he paid for a geological survey of the route of the Erie canal. In 1824 he founded the Rensselaer Polytechnic Institute at Troy. From 1823 to 1829 he was a member of congress, and his report secured the election of John Quincy Adams as president.



MARIA EDGEWORTH (English, 1767-1849) the creator of the novel of national manners and moral purpose, was the daughter of Richard Lovell Edgeworth, who devoted himself with enthusiasm to the education of his children, and joined with her in writing "Practical Education" (1798) and the "Essay on Irish Bulls". Her first novel appeared in 1800 and at once established her reputation. This was followed by "Belinda", "Popular Tales", "Fashionable Tales", etc., till the list reached to many volumes. The Encyclopaedia Britannica says: "She plainly belongs to the realistic school, and her tales are expressly founded on a carefully thought out philosophy of education, thus giving no countenance to the theory that teaching is a mere knack, rather than a science resting on well-ascertained mental phenomena. * * * In her pages the heroic virtues give place to prudence, industry, kindness, and sweetness of temper."



JOHN QUINCY ADAMS (American, 1767-1848), 6th president of the United States, was also for a time a professor in Harvard and author of a rhetoric. At 12 he visited Europe with his father, and again in 1814, attending the University of Leyden. At 15 he was secretary to the mission to St. Petersburg. After graduation from Harvard in 1788, he was in 1791 admitted to the bar, and in 1794 made minister to The Hague, and in 1797 to Prussia. In 1801 he returned to Boston, and in 1803 was elected to congress. He was professor of rhetoric in Harvard 1806-9, and his lectures, the first on the subject delivered in America, were published as a text-book, and for many years enjoyed wide popularity. They are still often called for. In 1809 he was made minister to St. Petersburg, and in 1815 to London. In 1825 he was elected president. In 1831 he was elected to congress, and remained a member till his death.



JAMES WADSWORTH (American, 1768-1844) after graduation from Yale in 1788 purchased with his brother large tracts of land on the Genesee river in New York, then unsettled. The enterprise was successful and made them wealthy; the death of the brother made James the sole proprietor. Much of his time and wealth he devoted to the common schools. He urged the setting apart of school lots, and the establishment of normal schools. In 1832 he secured the republication and distribution among the schools of Hall's "Lectures on School Keeping," and in 1835 and 1838 the establishment of the district library system. In 1842 he paid for the publication and distribution of 15,000 copies of "The School and the School-master," by Alonzo Potter and George B. Emerson. Altogether he expended more than \$90,000 for improving the schools, and his personal influence in their behalf was far more valuable.



EDWARD DANIEL CLARKE (English, 1769-1822), the first professor of mineralogy at Cambridge, in his capacity as a private tutor was a noted traveller. After the capitulation of Alexandria he aided in securing for England many statues, sarcophagi, maps, manuscripts, etc., which had been gathered by the French scientists. He sold his manuscripts to the Bodleian library for \$5,000, and he gave to Cambridge a colossal statue of the Eleusinian Ceres. In 1808 he was made professor of mineralogy, and he also pursued eagerly the study of chemistry, making several discoveries by means of the blow-pipe, which he brought to perfection. His health gave way under too ardent study. Besides his books on travel, on which his profits exceeded \$30,000, he published in 1807 "A Methodical Distribution of the Mineral Kingdom" and works on the ancient marbles he had brought to England. He was personally of most amiable character.



JOHANN GEORG TOBLER (Swiss, 1769-1843) was educated for a preacher, but had not sufficient memory to acquire foreign languages, and in 1799 became the head of a school at Basle for girl children of emigrants. In 1800 he joined Pestalozzi at Burgdorf, and remained with him seven years. He then founded a labor-school at Mühlhausen, which grew to 600 pupils, but came to an end in 1811. He returned to Basle to compile his pedagogical views and experiences and write a Pestalozzian geography, but for want of money was obliged to become a teacher. After some varied experiences he established at St. Gall a school where for 10 years he was allowed unimpeded control, and applied Pestalozzian principles to language, geography, and natural history. An account in his own words of his educational experiences and failures is given in Pestalozzi's *Christoph und Elise*. He passed his latter years at Basle, finishing his writings.



GEORGES CUVIER (German, 1769-1832), the greatest palaeontologist of his time, after graduation from the Academy of Stuttgart was in 1795 made assistant to the professor of comparative anatomy at the Paris Museum of Natural History. In 1796 he began lecturing at the Pantheon Central School, and in 1799 got the chair of natural history in the Collège de France. In 1802 he became titular professor in the Jardin des Plantes, and was appointed commissary of the Institute to accompany the inspectors of public instruction. In 1803 he became perpetual secretary of the National Institute. He also did much as an official connected with public education in general,—being placed in 1808 on the council of the Imperial University, and making three separate reports on the higher schools beyond the Alps. He was afterward made chancellor of the University, and minister of the interior.



FRIEDRICH HEINRICH ALEXANDER, BARON von HUMBOLDT (German, 1769-1859) after study at Frankfurt and Göttingen entered in 1791 the mining school at Freiberg. From 1792 to 1797 he was a mining officer at Bayreuth. He explored the Spanish colonies of Central and South America 1799-1803, bringing back an immense store of material, and lived till 1827 in Paris, publishing his researches in 29 volumes, with 2,000 exquisite illustrations. After 1827 he resided in Berlin at request of the king. In 1829 the Russian emperor placed him in charge of an expedition to central Asia, the results of which he published in 1843. "Kosmos" (1845-1850), his chief work, describes the numerous forms the world contains as one consistent existence. He astronomically determined more than 700 positions in South America, with many barometrical observations, and determined the magnetic equator.



ANOTHER PORTRAIT



DE WITT CLINTON (American, 1769-1828) after graduation from Columbia in 1786 studied law and became private secretary to his uncle, Gov. George Clinton. He entered the assembly in 1797, the State senate in 1798, and the United States senate in 1801. He was mayor of New York city 1802-15, lieutenant-governor 1811-13, and in 1812 received 89 electoral votes for the presidency of the United States. He was governor of New York 1817-22, and from 1824 to his death. His greatest work was the Erie canal, for which he had presented a memorial to the legislature in 1815. But he was also exceedingly active in promoting the interests of education. About 1795 he began studying the natural sciences, and as mayor of New York was active in establishing public schools and institutions of science, literature, and art. He was secretary 1794-7 of the regents of the University of the State of New York.



HENRY DAVIS (American, 1770-1852), 2d president of Middlebury, and 2d president of Hamilton, after graduation from Yale in 1796 was tutor at Williams, 1796-8, and at Yale, 1798-1803. In 1806 he became professor of Greek at Union, in 1809 president of Middlebury. In 1817 he declined the presidency of Hamilton and in 1818 that of Yale. Later in 1818 he accepted the renewed offer from Hamilton. He was president, 1818-33, and member of the board of trustees till 1847. The death of Azel Backus, after being president but four years, had left 50 students and 4 instructors, with principles of administration as yet unsettled. The number of students doubled, new buildings were erected, and the college got into debt. Serious dissensions arose between Dr. Davis and the trustees, as detailed in his "A narrative of the embarrassments and decline of Hamilton college" (1833). He left 9 students and a single professor.



JOSEPH JACOTOT (French, 1770-1840), the most important of the inventors of peculiar methods, based his system of teaching language upon this maxim: "Master whatever you learn, and proceed by the method of comparison"; to which he added four explanatory words, "Learn, repeat, compare, verify," that is, Learn thoughtfully; repeat often for sure memory; compare to discriminate, systematize, and generalize, thus assuring clear and distinct ideas; verify by bringing principles to the test of facts.⁴ After a simple statement of the subject with the leading divisions, all were free to ask questions, to raise objections, or to suggest answers. When professor of French at Louvain, he had pupils who knew only Flemish and Dutch, which he could not speak. So he gave them *Télémaque* with French on one side of the page and Dutch on the other, and had them learn the French by heart; thence his method developed.†



PHILIPP EMANUEL von FELLEBERG (Swiss, 1771-1844), educated at Tübingen, after an exciting political career, in 1799 purchased the estate at Hofwyl, near Bern, where in 1804 he sought to make agriculture the basis of a system of education. In 1807 he opened a special school of agriculture in buildings presented by the government of Bern, and in 1808 a philanthropin for children of wealthy parents. An institution for poor girls was added, and in 1830 a real school for children of the middle classes. A teachers' institute was established, and his schools received visitors from all over the world. Twice (1804 and 1817) Pestalozzi was for a time connected with him, but they could not agree. From 1809 to 1832 Wehrli was his assistant, and did much to make the school famous. Herbart was for a time one of his teachers. The fullest account of his work in English is in *The American Annals of Education*.



EBENEZER PORTER (American, 1772-1834), after graduation from Dartmouth in 1792 became a Congregational preacher. In 1812 he became professor of sacred rhetoric in the Andover Theological Seminary, founded in 1808, and in 1827 was made president. His epitaph speaks of him as a father of this institution, with which he was connected for 22 years. His health was feeble, owing to excessive night study during the early years of his ministry. He was a firm friend of the American Education Society, and bequeathed to it the greater part of his property. He was methodical in his business transactions, and his sound common sense was everywhere recognized. His text-books on oratory were well known for many years, and his "Rhetorical Reader" was for a long time a favorite in schools. In 1833 he published "Spiritual habits and progress in study", and was often a speaker at educational associations.



ELIPHALET NOTT (American, 1773-1866) was born in Ashford, Conn., and from a child showed avidity for learning, supporting himself by teaching winters, and taking a partial course at Brown university. He studied divinity, and in 1790 was sent to New York as a missionary. He became minister and teacher of the academy at Cherry Vally, N. Y., and in 1798 took a church at Albany. In 1804 he became president of Union college, and held the office till his death, graduating more than 3,700 students. He found 14 students, a few unfinished buildings, no library, no apparatus, no money in the treasury, and overhanging debts: but with undaunted energy he procured grants of land from the State, gathered books and instruments, endowed professors' chairs, and lived to see the college take high rank. From his success in dealing with students whom other colleges could not manage, under him Union was called "Botany Bay".



JEREMIAH DAY (American, 1773-1867), 9th president of Yale, after graduation from Yale in 1796 took charge of Dr. Dwight's school at Greenfield, was tutor at Williams 1796-8, and then returned to Yale, becoming professor of mathematics in 1801, and president in 1817. He held this office till 1846, a period of continual growth and great prosperity. The divinity school was started in 1822, the law school was revived in 1826, and the medical faculty was enlarged in 1829. Dr. Day was one of the college corporation till his death at the age of 94; he was one of the few men who had lived through both the revolutionary and the civil war. Among his text-books were those on algebra (1814, 1852), mensuration (1814), plane trigonometry (1815), and navigation and surveying (1817). His algebra was used in Yale until his death. In later life he defended Jonathan Edwards's and refuted Cousin's doctrine of the will.



JOHN GRISCOM (American, 1774-1852) began teaching at 17, and had such success at Burlington, N. J., that in 1807 he came to New York city on a guaranteed income of \$2,250, and in 1808 built a schoolhouse for himself, in which he taught for ten years. Gould Brown was one of his assistants. He became a lecturer on natural science, with experiments, and became recognized as the chief expositor of chemistry. He was also interested in pauperism, and in 1823 recommended the house of refuge for juvenile delinquents, established in 1825. He had already conceived the plan of a monitorial high school, and this he opened in 1825 with 250 boys, and soon found it filled to overflowing. It had 400 pupils when it closed in 1831. In 1827 he was appointed professor of chemistry in Rutgers medical college, and in 1832 became principal of a Friends' school in Providence. After two years he retired, and spent his days in literary work.



EDWARD BAINES (English, 1774-1848) was the son of a cotton manufacturer, but was apprenticed to a printer, and in 1795 entered the office of the Leeds Mercury, of which he soon became owner and so continued until his death. He made it one of the most influential country newspapers in the kingdom, and was mainly influential in securing the election of Macaulay to parliament in 1832, and succeeded him in 1834. At the first he was an advocate of popular education, and in 1823 he supported Dr. Birkbeck's plan for mechanics' institutions, and the infant schools started about that time, and in 1838 served on the committee on the state of education. But after his retirement from parliament his letters of 1846 in opposition to Lord Russell's plan of popular education had a powerful influence in determining the action of government. He said that he thought it was better to leave education to the people themselves.



GEORGE BIRKBECK (English, 1776-1841) at 23 was appointed professor of physics in Andersonian Institution, Glasgow. To procure apparatus he had to go himself to the shops of the mechanics, in whom he became so interested, that he gave lectures to them, which led to a "mechanics' class" at the institution and then to the establishment of a mechanics' institution there. In 1804 he settled in London as a physician, and in 1809 he was one of the projectors of the London Institution for the diffusion of literature, science, and the arts. In 1823, he founded the London Mechanics' Institution, which opened with 1,300 members. He was active in the establishment of University College in 1836, of the Society for the Diffusion of Useful Knowledge in 1832, and of the Central Society of Education in 1835. He is often called the pioneer of popular education in England, and from him the Birkbeck schools took their title.



JOHANN FRIEDRICH HERBART (German, 1776-1841) was interested in philosophical investigation from childhood. In 1793 he entered Jena, where Fichte had just become professor of philosophy, but said of him, "Fichte taught me chiefly by his errors." From 1797 to 1800 he was a private tutor at Berne; in 1800 he visited Pestalozzi at Burgdorf, afterward (1804) writing "Pestalozzi's Idea of the ABC of Observation Scientifically Treated"; from 1800 to 1802 he studied and taught at Bremen; in 1802 became lecturer and in 1805 professor at Göttingen; and in 1809 succeeded Kant as professor of philosophy at Königsburg. In 1810 he also founded a pedagogical seminary, held after 1812 in his own house. In 1833 he accepted a call back to Göttingen, where he died of apoplexy in 1841. His *Allgemeine Pädagogik* was published in 1806. His principles are best known to English readers in Rein's "Outlines of Pedagogy".



KASPAR SPURZHEIM (German, 1776-1832) studied at the university of Treves, and became in 1800 a pupil of Gall, the phrenologist, serving from 1804 to 1813 as his associate, proving a powerful advocate of the system. In 1808 they presented a joint memoir to the French Institute, and in 1809 began publishing their "Anatomy and Physiology of the Nervous System". In 1814 he went to Great Britain, and enlisted the aid of George Combe. He founded the Anthropological society. In 1832 he came to America to study the country and to propagate phrenology. His first address was before the American Institute of Instruction, and a series of lectures on phrenology soon followed, in which he so overtaxed himself that he fell ill, and died Nov. 10. His body was the first interred in Mt. Auburn. The Boston Phrenological Society took up his doctrines, and contained such men as S. G. Howe, John Pierpont, and Wm. A. Alcott,



SIR HUMPHREY DAVY (English, 1778-1829) was apprenticed to an apothecary, but devoted himself to self-education, especially to scientific experiments. In 1798 he became superintendent of a pneumatic medical institution, and his first paper was published in 1799. During the next year he published his researches on nitrous oxide. In 1801 he became lecturer at the Royal Institution, and in 1802 professor of chemistry. In 1807 became secretary of the Royal Society. For his electro-chemical investigations the French Institute gave him a prize of 3,000 francs. His production of potassium and sodium was shown in 1807, and of magnesium and strontium in 1808. He predicted the discovery of barium and calcium. In 1815 he invented the safety-lamp. He was a member of almost all the scientific societies of the world, and Cuvier said that he occupied the first rank among the chemists of his or any other age.



JOSEPH LANCASTER (English, 1778-1838), son of a Chelsea pensioner, began at 19 to gather the children of the neighboring poor for gratuitous instruction, at first in his father's house, and then in rented rooms. He soon had a thousand children assembled at Borough Road, London. Through the Duke of Bedford and others a building was provided, the King becoming interested, and Lancaster travelled over England giving lectures and establishing schools. But his projects exceeded his resources, and in 1807 he was arrested for debt. The British and Foreign School Society was formed to assume his work, leaving him in charge. But by 1813 his debts amounted again to \$40,000, and he became bankrupt. In 1818 he sailed to America, where he lectured and taught, finally settling down in New York city, which made him a grant of \$500. Here he was run over in the street by a carriage, and killed.



MARY ANNE SCHIMMELPENNICK (English, 1778-1856), daughter of Samuel Galton, is best known as the historian of the Port Royalists, to whom her attention had been called by Hannah More. She published in 1813 "Lancelot's Tour to Alet and La Grand Chartreuse"; in 1816, "Demolition of Port Royal des Champs"; and in 1829, an edition containing both, under the title, "Select Memoirs of Port Royal." These "little schools" started in 1643 as a protest against the system of the Jesuits, and were suppressed through the Jesuits in 1660; but their influence continued through the great literary ability of the lay brothers, who wrote, besides some pedagogic treatises, several approved text-books, long current under the name of Port Royal books. In the line of reform, one of their great merits was the stress they laid on the vernacular, making French the basis of all instruction.*



HENRY PETER, BARON BROUGHAM AND VAUX (Scotch, 1779-1868), founder of London university, after graduation from Edinburgh in 1795 was admitted to the bar in 1800. In 1802 he joined in founding the Edinburgh Review, had 80 articles in the first 20 numbers, and contributed to it for many years. In 1805 he removed to London, and in 1810 entered parliament. In 1821 he gained great popularity by his defence of Queen Caroline. He distinguished himself as a promoter of public education. In 1820 he brought in bills for maintaining parochial schools, he joined George Birkbeck in starting mechanics institutes, and in 1825 he published "Observations on the Education of the People", which resulted in the Society for the diffusion of useful knowledge. In 1812 he founded London university, and was prominent in the educational debates of 1833, 1835, and 1837. His works are published in 10 volumes (1857).



JOHN JAMES AUDUBON (American, 1780-1851), the eminent naturalist, was taken at 15 to Paris, where he had drawing lessons of David. At 17 he returned to America, and for 15 years searched the primeval forests simply through enjoyment of nature. His colored drawings of more than 1,000 birds, deposited with a friend in Philadelphia, were destroyed by rats, which threw him into a fever that nearly proved fatal. But he plunged into the woods again and in three years had filled his portfolio, and in 1826 he took the sketches to England where they were greatly admired. He published them, 1830-39, in elephant folio, every one of the 1,055 birds the size of life, and the most magnificent work of the sort ever issued. His "American Ornithological Biography" (1831-39) also filled five volumes. Afterward he published his "Birds" in 7 octavo volumes (1839), "Quadrupeds" (1840), and "Biography of Quadrupeds" (1840-50).



FRIEDERICH FROEBEL (German, 1782-1852) the founder of the Kindergarten, became in 1808 the tutor of two boys, and took them for two years to Pestalozzi's school at Yverdun. Here he not only gained the central idea of Pestalozzi's system, the idea of genuine human development and its conditions, but improved on Pestalozzi's idea of self-activity. In 1826 he published his principal work, "The Education of Man." From 1817 to 1831, he carried on a school at Kellnau. In 1837 he opened the first kindergarten at Blankenburg, believing that "the rousing of the need to learn must precede learning;" and in 1843 he published his "*Mutter- und Kose-Lieder*" (Mother Songs and Games), still a text-book in all kindergartens. His "Autobiography" (\$1.50) is fascinating for its simple directness; and his principles are best stated in "Child and Child-Nature" (\$1.50) by the Baroness Marenholz-von Buelow, his coadjutor.

1852]

FRIEDERICH FRÖBEL

123



ANOTHER PORTRAIT



KARL GEORG von RAUMER (German, 1783-1865), brother of the great historian Friedrich von Raumer, after university education was in 1811 made professor of mineralogy at Breslau. From 1819 to 1823 he was professor at Halle. From 1823 to 1827 he was an assistant at Dittmar's institution at Nuremberg for the rescue and education of orphan children. In 1827 he was made professor at Erlangen. While studying in Paris in 1806 he became so impressed by Pestalozzi's writings that he gave up his studies and was a voluntary assistant in Pestalozzi's school during the winter of 1808-9. His main work was his "History of Pedagogy", published 1846-1855. This was translated in great part for Barnard's *Journal of Education*, and a revised edition was published in 1877. The chapters on the education of girls, and German instruction, were also published separately. It is still a standard authority.



GIDEON HAWLEY (American, 1785-1870), first State superintendent of New York, after graduation from Union in 1809 was for a year a tutor there, but studied law and in 1812 was admitted to the bar. He was in that year elected State superintendent of common schools at a salary of \$400, and threw himself into the work with accustomed energy. He has been called the father of the common school system. In 1821 he was superseded by reason of political changes, which led to such dissatisfaction that the office was abolished, its duties being transferred to the secretary of state. He served as secretary of the regents of the University, 1814-1841, and in 1842 was elected a regent. On the organization of the Albany normal in 1845 he was made one of the executive committee. He was one of the four regents-at-large of the Smithsonian institute. He published privately "Essays in Truth and Knowledge" (1850).



DOMINIQUE FRANÇOIS ARAGO (French, 1786-1853) after education at the Paris Polytechnic became in 1874 secretary to the observatory, and with Biot was commissioned to measure the meridian of the earth as a basis for the metric system. In 1809 he was made a member of the Academy of Sciences, and elected professor in the Polytechnic. He was also named one of the astronomers of the observatory, and resided there till death. In 1816, in connection with Guy-Lussac, he edited the *Annales de Chimie et de Physique*, and in 1821 published the results of his observations on longitude. From 1812 to 1845 he had unparalleled success as a popular lecturer on astronomy. In 1830 he was elected to the chamber of deputies, where his services were of great value to science, and in the same year was made perpetual secretary of the Academy of Science. In 1848 he became secretary of war.



NATHAN GUILFORD (American, 1786-1854), founder of the school system of Ohio, after graduation from Yale in 1812 conducted a classical school in Worcester, Mass., but was admitted to the bar and in 1816 opened an office in Cincinnati. He became a zealous advocate of a liberal system of common schools, and opened up a correspondence with prominent men throughout the State. For 7 years he issued "Solomon's Thrifty's Almanac" with something on every page about free education. In 1824 he was elected to the State senate to secure a school tax. He secured the passage without amendment of the bill he had prepared for a tax of $\frac{1}{4}$ mill. He prepared an arithmetic and a revised edition of Webster's speller, from 1825 to 1843 he was a publisher and bookseller, and in 1847 he started a newspaper. In 1849 he became the first city superintendent of schools, and resigned in 1852 to become local magistrate.



GULIAN CROMMELIN VERPLANCK (American, 1786-1870) after graduation from Columbia in 1801, entered the New York legislature in 1820, and was in congress from 1825 to 1833, where he was noted as the most industrious man there. He sat afterward in the senate of New York, and was from 1829 to his death vice-chancellor of the regents of the university. His college addresses were widely published, including "The Right Moral Influence and Use of Liberal Studies" (1833), "The Influence of Moral Causes on Opinion, Science and Literature" (1834) and "The Advantages and Disadvantages of the American Scholar" (1836). They exerted an extended and uplifting influence for higher education. He issued an annotated edition of Shakspeare, and from 1846 was president of the commissioners of emigration, writing most of their reports. The memorial address upon him before the historical society was delivered by Bryant.



BENJAMIN GREENLEAF (American, 1786-1864), the mathematical author, after graduation from Dartmouth in 1813 taught in Haverhill, Mass., and in 1814 became preceptor of Bradford academy, the 14th in 11 years. He remained until 1836, beginning with 10 pupils. He was of nervous temperament, quick in thought and action, disciplining by "an odd mixture of ridicule, sarcasm, and moral suasion, with a wholesome seasoning of corporal punishment". He was a pioneer in public science lectures illustrated by experiments. He was in the legislature, 1837-39, and urged the foundation of an educational system; he also introduced an order for geological and natural history surveys. In 1839 he founded the Bradford teachers seminary, which he conducted till 1848. His mathematical books, first issued in 1835, became so popular that millions of copies were sold, and translations were made into Burnese and modern Greek.



THOMAS HOPKINS GALLAUDET (American, 1787, 1851) after graduation from Yale and from Andover became in 1814 a clergyman, but the next year visited Europe to qualify himself as a teacher of the deaf and dumb, and became a pupil of the Abbé Sicard. A year later he returned, bringing with him a highly educated deaf mute, and spent 8 months in soliciting funds for the American asylum at Hartford, which was opened April 15, 1817, with 7 pupils. In 1830 when the number of pupils had increased to 140, he retired on account of ill-health. The next year he published "The Child's book on the Soul", followed by his "Mother's Primer" and some text-books, besides religious books. He was an early advocate of the higher education of women. In 1833 he wrote "Public Schools Public Blessings", and was a frequent contributor to the *Annals of Education*. In 1838, he became chaplain of an insane retreat.



JESSE TORREY, JR. (American, 1787-?), an early champion of free public schools and libraries, in 1804 was one of the founders of the New Lebanon, N. Y., juvenile "society for the diffusion of knowledge", which had 148 members, and formed a free circulating library. In a pamphlet entitled "Intellectual Torch" (1817) he made a plea for public libraries, referring to Washington's words, "Promote as objects of primary importance institutions for the general diffusion of knowledge." His essays form a volume published in 1819 as "Moral Instructor". He was also a pioneer in temperance reform, and proposed a liquor tax of 50 cts. per gallon for the "universal establishment of free Lancastrian schools and free libraries". He believed in the gradual emancipation of slaves and their right to education. He published "A Portraiture of Domestic Slavery" (1822), reprinted in London with a preface by William Cobbett.



EMMA (HART) WILLARD (American, 1787-1870), the most noted woman-teacher of her time, devised plans for the higher education of women that so early as 1819 demanded aid of the New York legislature. In 1821 she removed her school to Troy, where it opened with 300 pupils and soon became famous. For 17 years she was the principal, assisted by her sister, Mrs. Almira Lincoln, afterwards Mrs. Phelps. The school has continued prosperous, and only recently has received gifts of \$150,000 for new buildings. Mrs. Willard became still more successful as an author, her text-books having an immense circulation. In 1830-31, she visited France, which furnished material for an entertaining volume. After an unfortunate marriage and divorce, she travelled, took part in educational conventions, etc., even acting as superintendent of town schools in Connecticut. Her "Life" by Dr. Lord appeared in 1874.



ABIGAIL CARLETON HASSELTINE (American, 1788-1868), principal of Bradford academy, did not talk till she was four years old, and then talked at once almost like an adult. She learned to read slowly and began arithmetic at 12. When Bradford academy was established in 1803 close by her father's house, she entered it, and in 1806 she began teaching at Hyfield, continuing at Pembroke and Beverly, and in a missionary school at Great Rock. In 1815 she became assistant preceptress and in a few weeks preceptress of Bradford academy. Here she became a great power. She was tall and stately, but as gentle in her sway as firm, and with an omnipresent sense of humor that won the pupils. In 1836 the academy became a school for girls alone, and she was made principal. In 1848 she resigned, but was called back, but in 1852 withdrew again, after a service of 38 years, acting as honorary principal.



MRS. ANN HASSELTINE JUDSON (American, 1789-1828), sister of Mrs. Joseph Emerson, who with her husband taught the school at Hyfield, Mass., where Mary Lyon graduated; and of Abigail Hasseltine, long preceptress of Bradford academy, taught in Haverhill, Salem, and Newbury, and in 1812 married Adoniram Judson and sailed for India. They found the East India company hostile, and went to Burmah. They had no knowledge of the language, no interpreter, no grammar or dictionary. Mr. Judson commenced preaching in 1819, while Mrs. Judson taught the women and children and assisted in the translation of the Bible into Burmese. In 1823 they settled down under the protection of the British flag, when she died of fever. President Wayland said he had never met a more remarkable woman, uniting clearness of intellect, large powers of comprehension, intuitive female sagacity, and disinterestedness.



SIR WILLIAM HAMILTON (Scotch, 1788-1856), the most eminent of Scotch metaphysicians, was professor of logic and metaphysics in the university of Edinburgh from 1836 till death. His authorship began with his "Philosophy of the Unconditioned" (1829), followed by "Discussions in Philosophy, Literature, and Education" (1852), "Lectures on Logic," etc. For twenty years his influence on the younger generation of minds in Scotland was predominant. It was his peculiar contribution to philosophy that he placed the data of perception along with the data of thought, and affirmed that both classes alike are inexplicable, yet as facts clear; that both rest on the same authority; and that if the one be accepted as true, so should the other. He was a realist, because he believed realism to be the dictate of consciousness, as to the alleged primary facts of which he laid down four criteria :



GEORGE COMBE (Scotch, 1788-1858) is best known as a phrenologist, but was the competitor of Sir Wm. Hamilton for the chair of logic and metaphysics in the University of Edinburgh, and declined a chair in the University of Michigan. He lectured in America, 1838-40, on education as enlightened by phrenology. He was one of the first to advocate scientific instead of classical education, and to oppose theological teaching in schools. He founded and taught in the famous "Willains Secular School" in Edinburgh, on the plan of the Birkbeck schools, and from 1846 to his death he was active in support of national education on non-sectarian principles. His educational works were gathered into a large volume by Wm. Jolly, under these principal heads : (1) What is education? (2) What subjects should be taught? (3) How should education be conducted? (4) Who should be educated?



ARTHUR SCHOPENHAUER (German, 1788-1850) after a wandering youth in 1809 entered Göttingen, and began to study Plato and Kant. In 1811 he went to Berlin, and heard Fichte and Schleiermacher. In 1813 he fled from war to Weimar, received his degree from Jena, and published his first book "On the Fourfold Root of the Principle of Sufficient Reason". In 1814 he quarrelled with his widowed mother, and never saw her again. In 1818 he published "The World as Will and Idea", and in 1819 accepted an appointment to lecture in Berlin. But he did not finish the first course, which he attributed to Hegelian intrigues, and he lived an unhappy life until 1831 in Berlin, and afterward in Frankfurt: and in 1836 he prefaced "The Will in Nature" by an attack upon Hegel. After 1850 he began to find growing recognition. He showed how feeble is spontaneity of intellect, and how overpowering the sway of original will.



AUGUSTIN LOUIS CAUCHY (French, 1789-1857) was for a time tutor to the Comte de Chambord, and from 1848 to 1852 professor of astronomy at Paris, but refused to take the oath of allegiance to Napoleon III, and lived the rest of his life in retirement. In 1882 the Academy began a reissue of his works in 26 volumes. In 1815 he published his memoir upon the theory of waves, which afterward became the basis of the undulatory theory of light, and in 1837 he published his memoir upon the dispersion of light. His demonstration in the same year that every numerical equation has a numerical root surpasses all others in simplicity and completeness, proving not only that a numerical equation of the n th order has a numerical root, but that it has n numerical roots. The demonstration does not assume the existence of any root: the contour may be the infinity of the plane. His biography in two volumes was published in 1868.



JOHN FARMER (American, 1789-1838) began teaching in 1810 near Amherst, N. H., where he formed a literary association for mutual improvement, and became a contributor to the Massachusetts Historical society. In 1821 he moved to Concord and became an apothecary, but gave most of his time to antiquarian research. In 1822 he started a journal on New Hampshire history, and aided in editing a gazetteer of the State. He was corresponding secretary of the N. H. Historical society, arranged the State papers at Concord, and published many historical and genealogical works. Through his articles the Quarterly Journal of the American Education Society became a thesaurus of information on higher institutions of learning, and is still of great value in the history of education. It continued for 15 volumes, 1827-1843, and gives portraits and sketches, histories of institutions, lists of graduates, etc., no where else found.



CYRUS FIERCE (American, 1790-1860) was graduated from Harvard in 1810, and after some teaching began in 1818 to preach, but in 1826 resumed teaching, going back in 1831 to Nantucket where for six years he conducted a private school. During this period Maria Mitchell, afterward professor at Vassar, was one of his assistants. In 1837 he became principal of the high school. Here his work attracted the attention of Horace Mann, who secured his appointment in 1839 as principal of the first American normal school, at Lexington. Here he overworked, seldom allowing himself more than four hours of sleep, but after a rest from 1842 to 1844, resumed the principalship of the school, then removed to West Newton. In 1849 he was once more compelled to resign, and he visited Europe as a representative of the American Peace Society. In 1850 he became assistant in the school of Nathaniel T. Allen, and taught altogether 50 years.



SAMUEL FINLEY BREESE MORSE (American, 1791-1872), inventor of telegraphy, was the son of Jedediah Morse, the geographer. After graduation from Yale in 1810, he went to London in 1811 with Washington Allston, intending to become a painter. In 1813 he received the gold medal of the Royal Academy for his first sculpture. Returning to America in 1815 he became one of the founders of the American Academy of design, and was for many years its president. He was also professor of fine arts in New York university. But he had been interested also in scientific studies, and in 1835 he set up in his college room a rude telegraphic apparatus. In 1844 he brought his invention before world, the first message being sent May 24. He became famous, and a congress of the governments of Europe especially convened at Paris voted to present him \$50,000. He also wrote pamphlets, poems, books, and magazine articles.



PETER COOPER (American, 1791-1883) founder of Cooper institute, had only the schooling he could get in half-day attendance for a single year. He was apprenticed to a coach-maker, and began to manufacture a machine for shearing cloth. After the war of 1812 he went into the grocery business, bought a glue factory, and erected the Canton iron works, near Baltimore. While there he built in 1830 a locomotive that would run up steeper grades and around sharper curves than had been thought possible, thus saving the B. & O. from bankruptcy. He manufactured iron near Trenton, N. J., and Easton, Pa., and became interested in telegraph-lines. The Atlantic cable was largely due to him. In 1876 he was the candidate for president of the national party. But his great work was the founding in 1854 in New York of "Cooper Union for the Advancement of Science and Art", to educate the industrial classes.



THEODORIC ROMEYN BECK (American, 1791-1855) after graduation from Union in 1807 had prepared a systematic report on minerals as early as 1813, and in 1815 became professor in Fairfield medical college. From 1817 to 1848 he was principal of the Albany academy, still continuing to lecture from 1826 to 1840 at Fairfield, and from 1840 to 1854 in the Albany medical college. From 1841 to his death he was secretary of the regents of the university. When the State geological survey was organized, the instructions prepared for the scientific staff were largely his work, and he was himself intrusted with the department of mineralogy. Out of this survey sprang the State Museum. He edited the *Journal of Insanity* from 1849 to 1853, and published much on the education of the deaf and dumb and the blind. He organized the Albany institute. He published in 1823 his celebrated treatise on "Medical Jurisprudence".



VICTOR COUSIN (French, 1792-1867) in the normal school at Paris was especially attracted by metaphysics, and in 1815 became instructor in that branch in the normal school and in the university. In 1817 he met Hegel and Schelling. In 1822 he was deprived of office and went to Germany, where through French influence he was imprisoned for six months. In 1828 he was with Guizot recalled to the university, and for three years crowded the Sorbonne with hearers as no lecturer had done since Abelard. In 1832 he was made member of the council of public instruction, in 1840 minister of public instruction, and during the reign of Louis Philippe was virtual director of France in philosophy and literature. To him France owed the advance from 1830 to 1848 in primary education. In 1831 he was sent to Germany and his reports on Public Instruction in Prussia and in Holland wrought great results everywhere.



MATTHIEU BRANSIET [FRERE PHILIPPE] (French, 1792-1874), superior-general of Christian brothers, went at 17 to the Petit-Collège at Lyons already determined to become a brother of the Christian schools. He soon became teacher of mathematics at Auray. In 1816 he went to Rethel, and in 1818 became director of the school established by St. De La Salle at Reims. He opposed the Lancasterian ideas then prevalent, and retained the simultaneous instruction established by his great predecessor. He was afterward director at Metz, and in 1823 was made director of the community St.-Nicholas-des-Champs, Paris. Here he published a geometry (1826). In 1830 he became one of the four assistants of the order of Christian brothers, and was instrumental in founding the first evening schools, to the gratification of Guizot. In 1838 he became supervisor-general. His text-books : in all the schools of the order.



WILBUR FISK (American 1792-1839) after graduation from Brown university in 1815 was licensed in 1818 to preach, and in 1825 was made principal of the seminary at Wilbraham, Mass., just removed from Newmarket, N. H. He began with 7 students, but during the five years he was in charge there were 1150 different persons in attendance. In 1830 he was elected first president of Wesleyan university, which had purchased the buildings erected for Capt. Partridge's military academy at Middletown, Conn., and the college opened Sept. 21, 1831. He remained president till his death, refusing many positions offered, among them that of bishop in the Methodist church. All through his life he had been in feeble health, but he worked hard to the last. In 1831 he took an active part in the controversy on the use of the Bible as a text-book. He has been called the originator of co-educational academies.



LOWELL MASON (American, 1792-1872) taught music in Georgia for 15 years, but in 1827 came back to Massachusetts and was so successful in class work as to arouse new interest in musical instruction. Through W. C. Woodbridge he became a convert to Pestalozzian methods. He began teaching the public school children on Wednesday and Saturday afternoons, and to give concerts. Vocal music was introduced into some influential private schools, and afterward into the public schools of Boston. In 1837 he visited Europe to examine the systems there taught. From 1834 to 1852 the Academy of Music gave annual institutes for instruction in Pestalozzian methods of teaching music. Horace Mann said it was worth any young teacher's while to walk ten miles to hear a lecture of Dr. Mason. His published works were many, and his hymns are sung every Sunday throughout the land.



THADDEUS STEVENS (American, 1792-1868) is counted among educational leaders because in 1835 he saved from repeal the law under which in 1834 Dr. Burrowes had organized the Pennsylvania school system. He was born on a farm in Vermont, and worked his way through Dartmouth college by cobbling and teaching. Upon graduating in 1814 he went to Pennsylvania to teach, soon becoming a lawyer, and a member of the legislature. The school-bill of 1834 was so unpopular that he barely escaped defeat for re-election because he had advocated it, and his constituents instructed him to oppose it. He defied their instructions and made in its favor the greatest speech of his life. He was member of Congress 1849-1853, and 1859-1868, and during the war was the recognized republican leader. When 72 years old he wrote that in reviewing all the work he had done, he felt the most pride in his defence of the free-school system.



MRS. ALMIRA LINCOLN PHELPS (American, 1793-1884), a younger sister of Mrs. Emma Willard, became at 16 a district school teacher, and after teaching in academies at Pittsfield, Mass., and Berlin, Conn., took charge of the public school in New Britain. She had for some time a private school at Berlin, and then became principal of an academy at Sandy Hill, N. Y. In 1817 she married, but after her husband's death in 1823 was for 8 years a teacher in her sister's school at Troy. Here her "Lectures on Botany" (1828) grew out of her class work. It was followed by her with like books on geology (1834), chemistry (1835), and physics (1836). In 1833 she published "The Female Student," or "The Fireside Friend". In 1831 she married John Phelps, in 1838 she became principal of a school at Westchester, Pa., and in 1841 of Patapsco Institute at Ellicott's Mills, Md. In 1856 she withdrew, to devote herself to literary work.



WARREN COLBURN (American, 1793-1833), manifested expertness in arithmetic at an early age, and after graduation from Harvard in 1820 opened a select school in Boston. In 1821 he published his "First Lessons in Intellectual Arithmetic," based on the principles of Pestalozzi, which received higher encomiums than any other text-book ever published in this country, and soon came into almost universal use, 50,000 copies being sold annually in Great Britain, and twice as many in America. In 1823 he withdrew from school to become superintendent of a manufacturing business, but lectured on scientific subjects, and published a "Sequel" to his "First Lessons," and an "Algebra." But his fame rests on the "First Lessons." Thomas Sherwin said: "I regard Mr. Colburn as the great benefactor of his age, with respect to the proper development of the mathematical powers."



GIDEON F. THAYER (1793-1863) became a teacher in 1814 and in spite of ill-health secured credit to purchase a site and erect on a scale of liberality hitherto unknown, his Chauncy hall school, still the most noted private school in America. His confidence and energy secured success from the first, and when he retired from the principalship in 1855 he left a flourishing school to his successor. He was a prominent founder of the American institute of instruction and of the Massachusetts State teachers' association, was one of the editors of the *Massachusetts Teacher* for 1848, and contributed to Barnard's *Journal of Education* "Letters to a Young Teacher". Of his address on "Connection of courtesy with school instruction" more than 50,000 copies were circulated by Henry Barnard. While a member of the Boston common council he was one of the originators of the movement to establish the public library.



DAVID STOW (Scotch, 1793-1864) was a Glasgow business-man much interested in poor children; for whom in 1816 he established a Sunday evening school. He learned of the work of Bell, Lancaster, Pestalozzi, and Wilderspin, and founded the Glasgow educational society, which in 1824 established a week-day training school. In 1827 this had developed into the first normal school in Great Britain, and in 1836 it was transferred to larger quarters. In 1841 the government grant was increased to \$25,000 on condition that the school should be turned over to the church of Scotland, which was done. When in 1845 disruption occurred in the church, Stow and the entire school sided with Chalmers and withdrew to what was called the Free church normal college, where he remained till death. His "Training System" passed through nine editions. A memoir by W. Fraser was published in 1868.



EDWARD EVERETT (American, 1794-1865) after graduation from Harvard at 20 became pastor of a large Boston church, and in 1814 was elected professor of Greek at Harvard. After five years in Europe for preparation, he entered upon this work and at the same time became editor of the *North American Review*. He gave in Boston the first purely literary lectures delivered in America. From 1834-34 he was a member of congress. From 1835-39 he was governor of Massachusetts, and aided in establishing the board of education. From 1841-45 he was minister to England, and from 1846-49 was president of Harvard, resigning through ill-health. In 1852, he succeeded Daniel Webster as secretary of state, and in 1853 entered the U. S. senate, resigning in 1854 on account of ill-health. The rest of his life was given to lectures and orations. In 1840 he published "Importance of Practical Education and Useful Knowledge".



WALTER ROGERS JOHNSON (American, 1794-1852) after graduation from Groton academy and Harvard college taught in Framingham and Salem, and became principal of Germantown academy, near Philadelphia. He undertook the cause of educational reform in Pennsylvania, publishing in the *Harrisburg Commonwealth* a series of 13 essays on education, followed in 1823 by 6 others in the *Journal of the Franklin Institute*. In 1825 he published a pamphlet advocating normal schools. The school law of 1834 was largely due to his efforts. From 1826 to 1836 he was principal of the high school of the Franklin Institute, where he taught Greek as a living language. He was also active in the scientific work of the Institute. From 1839 to 1843 he was professor in Pennsylvania college, and he conducted several scientific investigations for the government, especially one in relation to the use of coal.



ELIAS CORNELIUS (American, 1794-1832) after graduation from Yale in 1815 spent some time at Litchfield with Lyman Beecher, was licensed to preach in 1816, and became a missionary among the southwestern Indians. In 1819 he became pastor in Salem, and in 1826 secretary of the American Education Society, founded in 1816 to educate young men for the ministry. His work was largely as soliciting agent, and he was remarkably successful, owing to his earnest belief in the cause, and his cheerful and courteous zeal. He believed in ample training for the ministry, and he investigated closely the character and purposes of the young men assisted. He founded the American Quarterly Register, at first devoted to the interests of the Society. In 1832 he became secretary of the American Board of Commissioners for Foreign Missions, but died Feb. 12. His memoir by B. B. Edwards was published in 1834.



HARVEY PRINDLE PEET (American, 1794-1873) after graduation from Yale became in 1822 an instructor in the American asylum for the deaf and dumb at Hartford, and in 1831 became principal of the New York Institution for the deaf and dumb, which grew to be the largest in America. When he resigned in 1867 the institution had educated nearly 2,000 deaf mutes, and his son succeeded him as principal. He began in 1844 the publication of a course of textbooks for the deaf and dumb, and he wrote many historical and other papers on the subject. In that year Horace Mann urged the teaching of articulation and lip-reading, already used in German institutions, but the New York and Hartford Institutions decided against it. In 1868, at a meeting of American principals, it was however unanimously adopted for such pupils as are able to profit by it, and is now used nearly everywhere, either alone in connection with signs.



JAMES G. CARTER (American, 1795-1849) after graduation from Harvard opened a private school in Lancaster. In 1821 he began to publish newspaper letters in behalf of popular education, which in 1824 were issued in a pamphlet, "Letters to the Hon. William Prescott, LL.D." In these he deprecated the supplanting of free high schools by academies and the employment of untrained teachers, and advocated the introduction into the curriculum of inductive logic. A similar series of letters was published in 1826 under the title, "Essays upon Popular Education". In these he developed a plan for a teachers' seminary or normal school, and in 1827 he presented a memorial to the legislature for such an institution. It failed by one vote, and he started a private normal school in Lancaster, but was obliged to relinquish it on account of opposition. From 1835 to 1839 he was a member of the legislature.



EBENEZER BAILEY (American, 1795-1839), one of the pioneers in giving woman an opportunity for a higher education, after graduation from Yale in 1817 became a tutor in a Virginia family, and after a year opened a school for girls in Newburyport, Mass. In 1823 he became master of the Franklin grammar school, Boston, and in 1825 first principal of the girls high school. In 1827 he opened a private school for girls, which from the first enjoyed a high reputation. The equipment and course of instruction were far above those usually employed, and his graduates were eagerly sought for teachers. In 1830 he was one of the committee to organize the American Institute of Instruction. He published "The Young Ladies Class-Book" (1831), "Bakewell's Philosophical Conversations" (1832), and "Bailey's Algebra" (1833), for many years a popular text-book for beginners. The panic of 1837 forced him to give up his school.



WILLIAM BENTLEY FOWLE (American, 1795-1865), publisher of the *Common School Journal*, at 15 became a clerk in the Boston bookstore of Caleb Bingham. In 1821 he was elected a member of the primary school committee which established the first intermediate school, and adopted the Lancasterian plan of instruction. Mr. Tweed-Dale of Albany who had been put in charge being unable to remain, Mr. Fowle took his place. In 1823 he opened the Female monitorial school, which he conducted until 1840 obliged by ill-health to resign. In 1842 he became the publisher and after 1848 was the proprietor of *The Common School Journal*, until its discontinuance in 1852, when he once more opened a private school. His "Teacher's Institute" grew out of his experience as a conductor, "to use blackboards, and to teach in the room."



GEORGE PEABODY (American, 1795-1869), the philanthropist, became at 11 a clerk in a country store in Massachusetts. In 1811 he went to Georgetown, D. C., as clerk for an uncle, and in 1813 became a partner in a dry-goods business, removed in 1815 to Baltimore. In 1827 he visited London, and became a wealthy banker. In 1851 he contributed \$15,000 to provide for a display of American exhibits at the Great Exhibition, and in 1852 fitted out a ship for Dr. Kane's Arctic exploration, whence comes the name "Peabody land" in the region visited. In the same year he gave \$20,000, afterwards increased to \$250,000, to his native town, Danvers, Mass., for the Peabody Institute. Other gifts were a million to the Peabody Institute, Baltimore, 2½ million to the laboring poor of London, and 3½ millions to education in the south, besides many gifts to colleges and various charities, so that his name is familiar all over the country.



WILLIAM WHEWELL (English, 1795-1866) was a prize man in mathematics at Cambridge, and became a fellow and tutor at Trinity. From 1828-32 he was professor of mineralogy at Cambridge, and from 1838-55, professor of moral theology. In 1841 he was appointed master of Trinity, and in 1856 vice-chancellor of the University of Cambridge. He was such a voluminous writer and on subjects so diverse, that it was said of him that "knowledge was his forte, omniscience his folble". The anecdote is told that students who wanted to detect ignorance on at least one subject, worked up from old reviews a knowledge of Chinese music, and introduced it as a casual topic of conversation. When they had exhausted themselves he remarked, "I was imperfectly and to some extent incorrectly informed when I wrote the articles from which you have drawn your information." But his knowledge was profound as well as various.



SIR ROWLAND HILL (English, 1795-1879) taught in his father's private school, and developed at Hazelton the famous Hazelwood system, the chief points of which were (1) self-government and mutual responsibility, (2) fixed standards of merit instead of competition, and (3) natural penalties instead of arbitrary punishments. In 1822 he and his brother Matthew brought out "Public Education for the government and liberal instruction of boys in large numbers, as practised in the Hazelwood school," a book in which the system was made known. It was noticed at length in the *Edinburgh Review*, was translated into several foreign languages, and brought visitors from all over Europe. Jeremy Bentham read the book, sent for him, and became his warm friend. He was the author of penny-postage, adopted in 1840 and became secretary to the post-office. He was knighted in 1860.



THOMAS ARNOLD (English, 1795-1842) became during the last fourteen years of his life the most famous of modern schoolmasters. After graduation from Winchester and Oxford, and some private teaching, he was in 1828 elected master of Rugby school. One of his testimonials predicted: "If Mr. Arnold is elected, he will change the face of education all through the public schools of England"—and he did it. His success was due to his earnest endeavor to apply the principles of Christianity to life in the school as well as out of it. The amiability of his heart, the justice of his dealings, the transparent honesty of his character, made him at once loved and feared. The feeling grew up that it was disgraceful to tell a lie to a man who trusted boys as he did. In expelling some boys, he said: "It is not necessary that this be a school of 300, of 100, or even of 50 boys; it is necessary that it should be a school of Christian gentlemen."¹



JAMES HARPER (Scotch, 1795-1875) became at 12 a student in the University of Glasgow, and in 1813 in the University of Edinburgh. He studied theology at Selkirk and in 1818 was licensed to preach. In 1826 he became editor of the *Edinburgh Theological Magazine*, and in 1831-2 was a warm advocate of the Reform bill. In 1845 he became professor of systematic theology of the United Presbyterian Hall, and became in 1850 editor of its *Magazine*. He helped originate the movement against theological tests for lay professorships in the universities, resulting in their abolishment in 1853. He was identified from the first with The National Education Association of Scotland, advocating purely secular instruction and control, which finally prevailed in the law of 1872. When the United Presbyterian college was reconstructed he became in 1876 the first principal. His special strength was in the department of homiletics.



HORACE MANN (American, 1796-1859), was the most eminent and successful promoter of popular education of his time. As lawyer, statesman, and philanthropist he had achieved considerable reputation, when in 1837 he became secretary of the newly-established Board of Education of Massachusetts. He held this position for 12 years, working 16 hours a day. He made use mainly of three agencies: (1) a series of teachers' institutes; (2) a monthly *Common School Journal*, and (3) a wide circulation of his Annual School Reports to the Board of Education, which still rank as among the best of educational literature. In 1843, he visited Europe, and his comparisons in his 7th Report led to a heated controversy with the masters of the Boston schools. In 1848 he resigned to become U. S. Senator, and in 1854 he became president of Antioch College, where he remained till his death. ©



FRANCIS WAYLAND (American, 1796-1865) after graduation from Union began practice as a physician. Becoming converted, he entered the university, but after five years of preaching in Boston became professor of mathematics at Union, where he had previously served four years as tutor. Almost immediately he was elected president of Brown University, where he remained from 1827 to his resignation in 1855. He proved to be one of the half-dozen great college presidents of the generation, establishing firm discipline, and proving himself an instructor of remarkable power. A justice of the Massachusetts Supreme Court, himself a Brown graduate, said of a witness in a certain trial: "I should have suspected that that man was one of Dr. Wayland's students from the way in which he discriminated between character and reputation, two words often confounded."



SIR CHARLES LYELL (English, 1797-1875), the first geologist of his century, after graduation from Oxford in 1819 and 1821 began the study of law, but gave it up for geology. In 1823 he was elected secretary of the Geological society, and his first original paper was read before it in 1824. In 1827 he contributed to the *Quarterly Review* an article describing the part that scientific societies are to play in provincial education. His "Principles of Geology" appeared 1830-33, and gave the death-blow to the catastrophic school of geologists, showing a progressive state of existence on the globe. In 1831 he was made professor of geology in Kings college, London, and he gave lectures at the Royal institution in 1832. In 1835, 1836, 1849, and 1850 he was president of the Geological society, and in 1838 published his "Elements of Geology". He visited the United States in 1841 and 1845 and delivered a series of lectures before the Lowell institute.



MARY LYON (American, 1797-1849) had been a teacher for 20 years, when she attended Joseph Emerson's school at Byfield, and was impressed by his views of the higher education of women. She taught in the academy at Derry, N. H., and from 1828 to 1834 was principal of the academy at Ipswich, Mass. She resigned to establish the Mount Holyoke Female Seminary, to fit women for teaching by giving them advantages corresponding with those offered in colleges for men. She opened it in 1837, and presided over it till her death. A distinguishing feature was to have all the domestic labor performed by the pupils and teachers, thus reducing the expense and giving the young women exercise and practice in household work. This plan with some modifications is still pursued there, and was adopted at Wellesley college when it opened. In 1888 Mount Holyoke became a college.



GEORGE B. EMERSON (American, 1797-1881), one of the most influential teachers of Massachusetts, began in a district school when 17 years old, and withdrew in 1855, after having been for 25 years principal of a private school for girls in Boston. He served on the State Board of Education, was among the founders of the American Institute of Instruction, and aided Warren Colburn in bringing out his "Intellectual Arithmetic." He wrote in 1843 the second part of "The School and the Schoolmaster," placed by James Wadsworth and Mr. Brimmer respectively in every public school of New York and Massachusetts. Mr. Emerson's main efforts at reform in education were toward the abolishment of corporal punishment, and the extension of the education of women. Some of his experiences were gathered by him into a volume called "Reminiscences of an Old Teacher" (1878). In his later years he did much botanical investigation.



SAMUEL JOSEPH MAY (American, 1797-1871), a reformer in education and in anti-slavery, after graduation from Harvard in 1817 became in 1822 a Unitarian clergyman. In 1832 he was a member of the first New England anti-slavery society, and was the champion of Prudence Crandall when she was persecuted for admitting colored girls to her school in Canterbury, Conn. In 1835 he became general agent of the Massachusetts anti-slavery society. In 1842 he became principal of the State normal school at Lexington, Mass. In 1845 he became pastor of the church at Syracuse, N. Y., where in 1830 he had been mobbed and burned in effigy. Here he remained until in 1867 he became missionary in central New York for the American missionary association. He published "Education of the Faculties" (1846), "Revival of Education" (1855), and "Recollections of the Anti-Slavery Conflict" (1868.)



CHARLES ANTHON (American, 1797-1867), after graduation in 1815 from Columbia was from 1820 to 1830 adjunct professor, from 1830 to 1857 professor of Greek and Latin, and from 1857 to his death Jay professor of Greek, completing a continuous service in the college of nearly half a century. From 1830 to 1864 he was also rector of the grammar school. To the educational world at large, however, he is best known as an author of Latin text-books. In 1830 he published an edition of Horace, followed by some fifty classical books, mostly texts with annotations so superabundant that they were more popular with lazy pupils than with careful teachers, but had large sale both here and in England. As the notes were upon the same page with the text and gave paraphrases of much of the text, a quick-witted pupil could often enter a class without preparation, and recite with apparent credit.



DANIEL DEWEY BARNARD (American, 1797-1861) was made a clerk in the county clerk's office at Canandaigua, N. Y., at 12 years of age, was graduated from Williams in 1818, and began practice as a lawyer in Rochester in 1824. In 1826 he was made district attorney, and in 1827 was elected to congress, its youngest member. He opposed the anti-mason party, and was counsel for the defence in several of the "Morgan trials". In 1832 he removed to Albany, and from 1839 to 1845 was once more in congress. He was always interested in education, and in the legislature of 1838 presented the report on colleges, academies, and common schools upon religious exercises; and upon the subject and system of public instruction, the latter in connection with the new U. S. deposit fund. In this he pointed out the need of superior teachers, and recommended the extension of the regents system of training classes.



JOHN ADAMS DIX (American 1798-1879) became in 1813 the youngest officer in the U. S. army, but retired in 1826, and was admitted to the bar in 1828. In 1833 he became secretary of state for New York, and was for six years ex-officio superintendent of public instruction. He secured the establishment of training classes for teachers and school district libraries, and in 1837 published "Decisions of the Superintendent of Common Schools", a volume of 467 pages that has been the foundation of all works on school law since published. In 1845 he became senator in Congress, in 1853 assistant treasurer of the U. S., and in 1859 postmaster of New York city. In 1860 he was appointed secretary of the treasury, and gave the famous order, "If any one attempts to haul down the American flag, shoot him on the spot." In 1861 he became major-general, in 1866 minister to Paris, and in 1872 governor of New York.



JEAN MARIE CONSTANT DUHAMEL (French, 1797-1872), the mathematician, was educated in the Polytechnic school in Paris, and became teacher of mathematics there. He proved so successful both as an investigator and as a teacher that in 1821 he was made professor of higher mathematics in the University of Paris, where he remained until his death. In 1840 he became a member of the Institute. He was the author of many works on mathematics, analytical mechanics, and the theory of heat. Among his best known books are "Cours d'Analysis de l'École Polytechnique" (1840, 1841), "Cours de Méchanique" (3d ed. 1863), "Elements du Calcul Infinitesimal" (3d ed. 1874), and "Des Méthodes dans les Sciences de Raisonnement" (1866-72). All of these have been widely used both in France and abroad, and valued for clear statement as well as soundness; for he could demonstrate as well as investigate.



JULES MICHLET (French, 1798-1874) was sent by his poverty-stricken parents to college, and upon graduation began to teach in the public schools, rising rapidly till he became professor in the Collège de France. He lost his place by refusing to take the oath of allegiance to Louis Napoleon. In 1827 he published his first book, an outline of modern history. This was followed by more than 50 other volumes, growing out of his work as a teacher. He used to say the first principle of politics is education, the second principle is education, the third principle is education. He said that for Thierry history was a narrative, for Guizot an analysis, for himself a resurrection. "His pages are packed with first-hand information, and they glow with the fires of his love for his country as the sufferer, the teacher, and the prophet of the whole human race." He wrote other popular books—on natural history, etc.



WILLIAM RUSSELL (Scotch, 1798-1873), after graduation from the university, on account of lung trouble came to America as a tutor in a Georgia family. He married a Connecticut woman, and moved to New Haven, teaching for a time in the Hopkins grammar school. He began to teach elocution in Harvard, Andover, and the Chauncy hall school, and in 1826 became editor of the *American Journal of Education*, the first educational journal published in English. This labor in addition to his teaching was so burdening that after three years he relinquished it. In 1849 he established a normal school in New Hampshire, which he moved in 1853 to Lancaster, Mass. The State normal schools had made a private school no longer necessary, and it failed, compelling him to go back to his old work as instructor in institutes. He was the author of a "Manual of Mutual Instruction" (1826), and "Suggestions on Teachers' Institutes" (1848).



CHARLES DAVIES (American, 1798-1876), the mathematical text-book author, after graduation from West Point in 1815, in 1816 became assistant professor of mathematics there, and in 1823 professor. He resigned in 1837 on account of overwork upon his text-books and visited Europe. On his return he was professor in Trinity college 1839-41, but once more was compelled by ill-health to resign, and was made paymaster in the army. He was treasurer at West Point till 1846, when he became professor of mathematics in New York university. He retired in 1847 to give all his attention to his mathematical text-books. After teaching in the Albany normal 1855-57, he became in 1857 professor and in 1865 emeritus professor of higher mathematics in Columbia. His text-books (1837-67) ranged over the entire field of mathematics, including a "Mathematical Dictionary" (1855). His last work was "The Metric System" (1870).



WILLIAM A. ALCOTT (American, 1798-1859) was a farmer's son, and when 18 taught his district school for the winter at ten dollars a month and board himself. He taught for six winters, and in 1822 got a school for the entire year, at \$100 and board around. His experiences are given in his "Confessions of a Schoolmaster." He continued to teach, but in 1824 began to study medicine, and in 1826 got license to practise. He continued to teach occasionally, however, introducing many novel ideas, and was active on the school committee, established a library, and wrote a good deal for the press. In 1830 he joined W. C. Woodbridge in starting a Fellenbery school near Hartford, and in 1832 he went to Boston to assist Dr. Woodbridge in editing the *Annals of Education*, a large monthly journal. Here he became a voluminous author, especially of medical and Sunday school books.



AMOS BRONSON ALCOTT (American, 1799-1888), a peripatetic philosopher, was sent south as a boy to peddle in Virginia. He went among the plantations, welcome as a visitor but making no sales. In 1823 he started an infant school, and in 1828 another in Boston, the peculiar methods in which are described in Elizabeth Peabody's "Record of a School" (1834, 1873). It was not successful, and he removed to Concord, where he became one of the most picturesque figures in the Concord school of transcendentalists. He was especially noted for his "conversations", which he delivered on a wide range of speculative and practical themes in the principal cities of the country. Among his books are "Conversations with Children on the Gospels" (1836), "Tablets" (1868), "Concord Days" (1872), "Table Talk" (1877), "New Connecticut" (1881), "Sonnets and Canzonets" (1882), "Ralph Waldo Emerson" (1882).



SAMUEL LEWIS (American, 1799-1854) - after a youth of poverty and hard work was admitted to the bar in 1822, was licensed as a local preacher in 1824, and in 1837 was elected superintendent of common schools for the State of Ohio. He travelled 1200 miles on horseback, he found half the districts without schoolhouses, and he recommended to the legislature a state fund, supervision, a school journal, etc. The school law of 1838 was practically his, and in that year he issued *The Common School Director*, visited 65 counties, delivered addresses, studied the schools, and particularly begged for central high schools. In 1839 he recommended a State normal school. That winter the legislature united the office of superintendent to that of secretary of state, and though he was urged to be a candidate for the latter office he declined. He was from its foundation president of the Cincinnati school board.



GEORGE BANCROFT (American, 1800-1891) though his fame is as an historian had much to do with education in his earlier years. After graduation from Harvard in 1817 and from Göttingen in 1820 he became in 1822 teacher of Greek at Harvard, and in 1823 joined Joseph G. Cogswell, afterward superintendent of the Astor library in opening in Northampton, Mass., the Round Hill school for boys, something on the plan of Rugby and Eton. It did not receive boys more than 12 years old, made English first in importance, provided native teachers in French, Spanish, German, and Italian, and taught inductively so far as possible. A pupil of Jahn taught gymnastics. A uniform was required of blue broadcloth with brass buttons. When Mr. Bancroft retired in 1831, the school had numbered 290 pupils, among them many who had become famous. But it did not prosper financially and he gave it up for literary work.



ANOTHER PORTRAIT



ERASTUS CORNELIUS BENEDICT (American, 1800-1880), 13th chancellor of the University of the State of New York, after graduation from Williams in 1821 was principal of academies at Jamestown and Newburgh, N. Y., and for a year a tutor at Williams. He was admitted to the bar in 1824, and was deputy clerk of the U. S. district court, 1827-9. He became the leading lawyer of New York in admiralty cases, and his "American Admiralty, its Jurisdiction and Practice" (1850) was recognized as the standard authority. In 1848 and in 1864 he was elected to the assembly, and in 1872 to the senate. He was a member of the New York board of education 1850-63, and its first president. In 1855 he became a regent of the University of the State of New York, in 1872 vice-chancellor, and in 1878 chancellor. He published "A Run through Europe" (1860), and "The Hymn of Hidelbert" (1869).



SAMUEL BUELL WOOLWORTH (American, 1800-1880), 9th secretary of the board of regents, after graduation from Hamilton in 1822 taught for two years in Monson, Mass., where Henry Barnard was his pupil. He was principal of the Onondaga academy, N. Y., 1824-30, of the Cortland academy, Homer, 1830-51, and of the Albany normal 1852-6. In 1856 he succeeded Dr. Beck as secretary of the Regents of the University. Under his administration the apportionment of the Literature fund was made dependent upon the number of pupils who had passed examinations in the fundamental branches, which showed them qualified to take up advanced subjects. Thus began the system of Regents examinations, which is the most extensive ever instituted. He was also a mover in the establishment of the University Convocation. He was one of the founders of the State teachers association, and in 1847 president. He was 40 years trustee of Hamilton college.



WILLIAM ELLIS (English, 1800-1881) was well-known as a philanthropist and writer on education, but was already middle-aged when in 1846 he offered his services as teacher of social science in the schools of the British and Foreign School Society. In 1848 he founded the first Birkbeck school in London, soon followed by others. These schools excluded sectarian teaching, introduced physiology, and abolished corporal punishment. Reading was taught in connection with lessons on objects ; spelling and grammar from the reading lessons ; and social economy was made prominent, including instruction in the means by which wealth is produced, the division of labor, and the importance of parental foresight and economy. These schools did much to lay the foundation for the present system of national schools. His "Education as a means of preventing Destitution" is still regarded as a standard work.



ALONZO POTTER (American, 1800-1865) after graduation in 1818 from Union college, was professor there from 1821 to 1826 and from 1831 to 1845, when he was elected bishop of the Episcopal church. He was always interested in the common schools. He was the first president of the American association for the advancement of education, and was adviser of the department of public instruction at Albany and of James Wadsworth in his benefactions to education. He wrote the first part of "The School and the Schoolmaster", of which 15,000 copies were distributed by Mr. Wadsworth among the schools of New York, and of which 60,000 copies were sold; and was prominent in all school associations up to the time his health broke down from overwork. In the war of 1861 he was an active member of the sanitary and Christian commissions, and an advocate of emancipation.



MARSHALL CONANT (American, 1801-1873), 2d principal of the Bridgewater normal, was a Vermont farmer's boy, and became a carpenter, but studied in his spare hours, and in 1823 endeavored to compute the elements of a comet that appeared. At 23 he began teaching at \$12 a month paid in corn, and succeeded in calculating correctly two eclipses. In 1828 he calculated an almanac of which 10,000 copies were sold, and continued its publication for five years. In 1829 he opened a select school in Woodstock, and in 1834 became a teacher in a Boston grammar school. In 1836 he opened another private school, in 1839 took an academy at Hillsboro, Ill., and in 1841 at Framingham, Mass., and from 1845 to 1853 was engaged in out-door engineering work. From 1853 to 1860 he was principal of the Bridgewater normal, and from 1862 to 1872 was an officer in the internal revenue department at Washington.



THEODORE DWIGHT WOOLSEY (American, 1801-1889), 10th president of Yale, after graduation from Yale in 1820 studied law in New York and theology at Princeton and was tutor at Yale 1823-25. He studied in Europe 1827-30, and in 1831 became professor of Greek at Yale, of which he was president 1846-71. After his resignation he lectured in the law school, and continued his studies in political science. Besides editions of four Greek texts and his college addresses, he published his "International Law" (1874), "Essay on Divorce" (1869), "The Religion of the Present and the Future" (1871), "Political Science" (1877), and "Communism and Socialism" (1879). He also re-edited after the author's death Lieber's "Civil Liberty and Self-Government" (1874) and "Manual of Political Ethics" (1874). He was for several years a regent of the Smithsonian institution, and one of the committee for the revision of the New Testament.



JOHN KINGSBURY (American, 1801-1874) after graduation from Brown in 1826, established in 1828 his "Young Ladies' High School", over which he presided for 30 years, during which period he was absent from the school altogether only 11 weeks. The school was a pioneer in giving higher education to women, but was a success from the start. The number of pupils was never allowed to exceed 43, and there was always a long waiting-list of applicants. Altogether he had 557 of the best young women of Providence under his charge, many of them of a second generation. From 1857 to 1859 he was State commissioner of public instruction, and devoted himself to a careful inspection of the schools, visiting nearly every district in the State. He was one of the founders of the American Institute of Instruction and of the Rhode Island Institute of Instruction. From 1853 he was the secretary of Brown university.



SAMUEL GRIDLEY HOWE (American, 1801-1876), after graduation from Brown university in 1821 studied medicine, but soon sailed for Greece to take part like Lord Byron in the Greek revolution, of which in 1828 he published a history. Upon his return, becoming interested in the education of the blind in the Abbé Hailly's schools in Paris, he went there in 1830, and afterwards to Berlin, where he was imprisoned for bearing gifts to the Polish revolutionists, at request of Gen. Lafayette. He was released in 1832, and came back to America to begin teaching the blind. His success led Col. Perkins to found for him the Institution for the Blind in Boston. In 1837 he began to train Laura Bridgman, a deaf, dumb, and blind child, and his success is narrated from year to year in his reports. In 1843 he married Julia Ward, afterward the author of the "Battle Hymn of the Republic". He was prominent in all philanthropic work.



SIMEON NORTH (American, 1802-1884), 5th president of Hamilton, after graduation from Yale in 1825 was a tutor there, 1827-9, and was graduated from the divinity school in 1828. He came to Hamilton as professor in 1829, in the midst of President Davis's trouble, when there were but nine students and one professor. He remained 10 years as professor, and in 1839 became president, resigning in 1857. He was trustee until his death, his entire connection with the college covering 55 years. He was also a trustee of the Auburn theological seminary 1840-49. Among his published works were "The American System of Collegiate Education" (1839), "Faith in the World's Conversion" (1842), and "Anglo-Saxon Literature" (1847). A leading event of his administration was the election in 1841 of Prof. Mandeville to the chair of rhetoric, leading to the training in public speaking for which the college has ever since been noted.



TAYLER LEWIS (American, 1802-1877), an eminent scholar, after graduation from Union in 1820 studied law, and practised at Fort Miller, N. Y., where he became absorbed in the study of Hebrew and Greek. In 1833 he abandoned law and took a classical school in Waterford. In 1837 he was made professor of Greek in New York university, and in 1849 professor of ancient oriental languages at Union. In 1863, having suffered for many years from deafness, he was shocked by the wounds in battle of his son and the death upon the field of his son-in-law, but his activity as a writer continued till the last. His published works included "The Nature and Ground of Punishment" (1844), "The Six days of Creation" (1855), "The Divine Human in the Scriptures" (1860), and "State Rights, a Photograph from Ancient Greece", which had wide circulation in the early days of the civil war.



CALVIN ELLIS STOWE (American, 1802-1886) after graduation from Bowdoin and Andover, in 1830 became professor of languages in Dartmouth college and in 1833 professor of biblical literature in Lane theological seminary. In 1850 he became divinity professor at Bowdoin, and in 1852 professor of sacred literature at Andover, where he remained till 1864. In 1836 he visited Europe, and on his return published his "Report on Elementary Education in Europe". The legislature of Ohio distributed this report to every district in the State, and Massachusetts, Pennsylvania, Michigan, North Carolina, and Virginia took similar action. It pointed out so strongly the thoroughness, completeness, and comprehensiveness of primary instruction in Prussia and Wurtemberg that the attention aroused led to great advancement in our own schools. In 1836 he married Harriet Beecher, afterward author of "Uncle Tom's Cabin".



HUGH MILLER (Scotch, 1802-1856), was among the most remarkable of self-taught men of genius. At 13 he was an incorreible truant, and the schoolmaster thought he would grow up a dunce. But he had a great fancy for authorship, and became a stone-mason that he might have the unemployed winter time for literary composition. Under the discipline of labor the refractory schoolboy became a sober-minded man. After his marriage he got employment in a bank, but after a pamphlet-letter to Lord Brougham in 1839 had made him famous, he became an editor of *The Witness*, of Edinburgh, which position he held until his death, which occurred from a pistol-shot from his own hand while crazed from over-work. His autobiographical "My Schools and Schoolmasters" ranks among the masterpieces of its kind in English literature, but he is best known for his contributions to geology.



THOMAS GUTHRIE (Scotch, 1803-1873) after ten years at the university of Edinburgh began preaching in 1825, but did not secure a pastorate till 1830. By 1837 had become recognized as a great pulpit orator. He supported the disruption of 1843 and was henceforth associated with the Free church. In 1847 he published his first "Plea for Ragged Schools"—schools for poor children, where food, clothing, and industrial training as well as schooling were given. One of these had been opened in London in 1841, and Dr. Guthrie became the apostle of the movement. His first "Plea" was quoted in newspapers everywhere. The *Edinburgh Review* approved the movement, and \$3,500 in subscriptions soon came to him. Two other "Pleas" followed, united in "Seed-Time and Harvest of Ragged Schools" (1860). He was also an advocate of national and of compulsory education, and from 1847 of total abstinence.



MARK HOPKINS (American, 1802-1887), 4th president of Williams college, after graduation from Williams in 1824, was a tutor there 1825-7, and in 1829 was graduated from the Berkshire medical school. He began practice in New York, but in 1830 was called to Williams as professor of moral philosophy, and in 1836 became president. This office he held till 1872, when he resumed his former chair. He was one of the few great college presidents, leaving his impress upon every young man who came there. He was president of the American Board of Commissioners of Foreign Missions from 1857 till his death. Among his books are "Evidences of Christianity" (1846, 1864); "Moral Science" (1862); "Law of Love and Love as a Law" (1869, 1881), which led to a controversy with President McCosh; "An Outline Study of Man" (1873, 1886); "Scriptural Idea of Man" (1883); "Teachings and Counsels" (1884).



EGERTON RYERSON (Canadian, 1803-1882), first superintendent of Ontario, began teaching at 16, but in 1825 was ordained and began preaching. In 1829 he helped establish *The Christian Guardian*, and became its first editor. In 1835-6 he was in England getting a charter and subscriptions for Cobourg academy, and in 1840 became first president of "The University of Victoria college at Cobourg". Three years after the establishment of a new system of education for Ontario, he was in 1844 appointed superintendent, and in 1850 framed a school law which is still the basis of the system in force. In 1854 he established a system of free public school libraries, and in 1857 gathered material for an educational museum. In his report to the English and Scotch inquiry commissions, James Fraser said that what England owed to J. K. Shuttleworth and New England to Horace Mann, Canada owed to Ryerson.



JACOB ABBOTT (American, 1803-1879), famous as a writer for the young, after graduation from Bowdoin in 1820 and from Andover in 1825, was tutor at Amherst 1824-5 and professor of mathematics 1825-29. He established the Mount Vernon school for girls in Boston and conducted it 1829-34, and was pastor of the Eliot church 1834-6. For several years he devoted himself to literary work, partly in Farmington, Me., and partly in New York city. He became known as an author through the "Young Christian" series, but his fame rests principally upon his "Rollo" books (28 vols.), the "Franconia" stories (10 vols.), "Harper's Story Books" (36 vols.), and other juvenile works. Altogether his works exceed 200 titles. "The Teacher, or Moral Influences in Training the Young" (1831) is still a useful book for teachers. His "A Description of the Mount Vernon School in 1832" is rare and very interesting.



ELIAS LEAVENWORTH (American, 1803-1895), last ex-officio superintendent of schools of New York, after graduation from Yale in 1824 studied law with William Cullen Bryant, and in 1827 was admitted to the bar and began practice in Syracuse, N. Y. He was president of the village, 1838-41, and in 1849 and 1859 mayor of the city. In 1853 he was elected secretary of state, and ex-officio superintendent of common schools. He warmly supported Gov. Seymour's recommendation that there be organized a separate department of public instruction, and this became a law in 1854. In 1849 and 1856 he was elected to the assembly and in 1874 to congress. From 1861 to his death he was one of the regents of the University of the State of New York. By his will he provided for a public fountain and for the laying out of the park in Syracuse which bears his name. He was president of the Syracuse Savings bank.



FREDERIC HILL (English, 1803—) was the son of a schoolmaster, and at 13 taught in his father's school, and with his brother Rowland at the famous Hazelwood school. In 1831 he became interested in parliamentary reform, and in 1832 wrote "National Education in its Present State and Prospects", published in 1836. In 1834 he became secretary to Lord Truro, and in 1835 was appointed inspector of prisons. Thereafter, he devoted himself to prison reform, establishing the separate system, the abolition of flogging, useful labor, with pay for extra hours, and encouraging industrial schools. In 1853 he published "Crime, its Amount, Causes, and Remedies", recommending the system now in use at the Elmira Reformatory, which he highly approved. From 1851 to 1876 he was employed in the post-office, and made many improvements in the service. At the age of 90 he was still as interested as ever in prison reform.



RICHARD OWEN (English, 1804-1892) studied medicine at Edinburgh and London, became a member of the royal college of surgeons in 1826, and soon after assistant curator of the Hunterian museum, where his researches led to new classifications of animals, the addition of new genera and species, and his "Physiological Series of Comparative Anatomy" (1833-40). His ability was especially shown in the reconstruction of extinct families. In 1836 he became Hunterian professor in the college of surgeons, and in 1856 chief of the natural history department of the British museum, holding also a professorship in the Royal institution, London. On his retirement in 1883 he was made K. C. B. Among his works are "Odontography", "British Fossil Manual and Birds", "British Fossil Reptiles", "The Vertebrate Skeleton", "Parthenogenesis", "Lectures on Comparative Anatomy", "Anatomy of Vertebrates", etc.



ELIZABETH PALMER PEABODY (American, 1804-1894) was the daughter of a physician and of Miss Palmer, a noted teacher. Her sisters married Nathaniel Hawthorne and Horace Mann. In 1830 she translated De Gerando's "Self-Education". She assisted A. Bronson Alcott in his school, of which she published in 1835 "A Record of a School". In 1841 she published "A Theory of Teaching", followed by several text-books. In 1860 she started in Boston a private kindergarten, but in 1867 went to Germany to study with Frau Froebel, and returned to introduce genuine Froebelian methods. She was editor of *The Kindergarten Messenger* (1873-5, 1877, 1881-2). Her "Moral Culture of Infancy" (1863) was reissued in 1869. In 1878 she published "After Kindergarten—What?", and in 1888 "Lectures in the Training Schools for Kindergarteners". Her benevolent spirit knew no boundaries and no limits.



NICHOLAS TILLINGHAST (American, 1804-1856), graduated from West Point in 1824, after three years' service became instructor at West Point until 1834, and resigned from the army in 1836 to establish a private school in Boston. In 1840 he became first principal of the Normal School at Bridgewater, the only one of the first three normal schools of Massachusetts that survived. His success lay in his personal character, in that quiet but unflinching devotion to principle, that heroic and real abnegation of self, which to those who knew him intimately appeared as the ruling trait of his moral nature. The mere knowledge on the part of a pupil that Mr. Tillinghast disapproved his course, even where no disapprobation had been expressed, was a burden which few could endure. But though at first reserved, and apparently cold and distant, he was kind-hearted and generous, sympathetic and kind.



CHARLES KNAPP DILLAWAY (American, 1804-1889) after graduation from Harvard in 1825 became in 1831 headmaster of the Boston Public Latin school. In 1836 he resigned his position on account of ill health, and for several years taught in private school for boys in Boston, and later a school for young women in Roxbury. He was also frequently called upon to teach our language to foreigners, especially to Japanese. He was the author of numerous textbooks, including eight volumes of Cicero, and one each of Plautus, Terence, Quintilian, and Tacitus; and edited editions of the Colloquies of Erasmus, Roman antiquities and mythology, etc. He wrote a history of the Roxbury Latin school, of which he was trustee for more than 40 years, aided Pickering in preparing his Greek lexicon and Worcester in his English dictionary, and was a frequent contributor to periodical literature.



ROBERT RANTOUL, JR. (American, 1805-1852) after graduation from Harvard in 1826 began the practice of law in Gloucester, Mass., in 1829. He was elected to the legislature in 1834 and to the State board of education in 1837, where he was one of the warmest supporters of Horace Mann as secretary. In 1843 he became collector of the port of Boston, and in 1845 U. S. district attorney. In 1851 he succeeded Daniel Webster in the U. S. senate, and in the same year was elected to the house of representatives. He was always warmly interested in education, and in 1839 addressed the American Institute of Instruction on "The Education of a Free People". His "Remarks on Education", reviewing Horace Mann's 1st report, and first published in the *North American Review*, was widely circulated as a pamphlet, and did much to sustain Mr. Mann's efforts, and to carry on the reform of education in Massachusetts.



HENRY PHILLIP TAPPAN (American, 1805-1881) after graduation from Union in 1825 and some years as a clergyman, in 1832 was made professor of moral and intellectual philosophy in New York university. In 1838 the entire faculty resigned, and for a time he conducted a private school. For the first ten years the university of Michigan had no president, and Mr. Tappan, elected in 1852, was the first to hold that office. He did much to develop the institution on the broad lines laid down by its early founders, but on account of lack of harmony with the faculty and the regents was removed in 1863, E. O. Haven being elected his successor. Thereafter he lived in Europe, finally settling down in Vervay, Switzerland. He wrote three books on the "Freedom of the Will", afterward republished in Glasgow, "Elements of Logic", "Treatise on University Education", and "A Step from the New World to the Old".



THOMAS HENRY BURROWES (American, 1805-1871) "the father of Pennsylvania common schools", a lawyer, was in 1831 elected to the legislature, and in 1835 appointed secretary of the commonwealth. He became interested in the common school interests of the State, and found the law of 1834 inadequate. Almost alone he drafted the law of 1836, which continued in force till 1849. In 1838 a change of administration removed him from office, and after seven years upon the farm he resumed in 1845 the practice of law. He also published newspaper articles on education, and in 1852 began the publication of the *Pennsylvania School Journal*, which occupied most of his time till 1870. In 1855 he published "Pennsylvania School Architecture". From 1860 to 1863 he was State superintendent, in 1865 he was made superintendent of soldiers orphans, and in 1869 became president of the State agricultural college.



FREDERICK DENISON MAURICE (English, 1805-1872), founder of the Working Men's college, and of Queens college, after graduation from Cambridge in 1827 became a writer on the social, political, ecclesiastical, and scientific questions of the day, and in 1831 joined the established church and became a preacher. His books, "The Kingdom of Christ" (1838), "Lectures on Education" (1839), and others, laid the foundation for the Broad church as it was called. In 1854 he founded and became principal of the Working Men's college, with the help of such men as John Ruskin and Thomas Hughes. He edited *The Educational Magazine*, new series, 1839-41. He was professor of literature in King's college 1840-53, and in 1866 became professor of moral philosophy at Cambridge. In 1848 he founded Queens college, especially intended for governesses. He favored Sunday recreation for working people. His works are mostly religious.



GEORGE ANTHONY DENISON (English, 1805-) after graduation from Oxford was elected fellow of Oriel college. He was ordained deacon in 1832, and was curate of Cuddesdon till 1838, when his brother, then Bishop of Salisbury, gave him the living of Broadwindsor, whence he was transferred in 1845 to East Brent, subsequently becoming archdeacon of Taunton. In 1853 he was accused of unsound doctrine and in 1856 was deprived of all his preferments, but the sentence was set aside by the Court of Arches. He was examiner in classics at the Charterhouse, 1832-1838, examiner for the Ireland scholarship to Oxford, 1837-8, and for the Newcastle scholarship at Eton. At Taunton he established a training-school for schoolmasters, and a middle school for the sons of farmers and tradesmen. He was one of the most pronounced opponents of national education, and especially of "The Manchester and Salford scheme".



AUGUSTUS DE MORGAN (English, 1806-1871) was born in India, but was brought to England when an infant, and in 1827 took fourth place in the mathematical tripos at Cambridge. He was professor of mathematics in University college, London, 1828-1831, and 1836-1866, and recognized as an unrivalled teacher. For 30 years he edited the publications of the Royal Astronomical society, and his mathematical works were numerous, beginning in 1828 with a translation of part of Bourdon's algebra, and including his *Calculus* (1842), and his "Foundations of Algebra" in the 7th and 8th volumes of the *Cambridge Philosophical Transactions*. But he was also a famous reformer in the field of logic, the importance in mathematics of training in which he always insisted upon. His "Formal Logic" was published in 1847, and his "Syllabus of a Proposed System" in 1860. "He was the kindest as well as the most learned of men."



JOHN STUART MILL (English, 1806-1873), the son of James Mill, historian and political and mental philosopher, had an extraordinary early education. He was taught the Greek alphabet at 3, and at 8 had read a great many Greek books in the original, as well as much history in English. He then began Latin, Euclid, and Algebra, and became tutor to the younger children. At 12, he began logic, and at 18 political economy; and here, when nearly 14 his education terminated, and he began to work under his father's eye. He had been his father's constant companion, and had acquired by example the habit of strenuous application to difficult labor. He was also taught to regard himself as consecrated to a life of labor for public good. In 1823 he became a clerk in the India House. He wrote for the magazines, published his "Logic" in 1843, his "Political Economy" in 1848, and his "Philosophy" in 1858.



ANOTHER PORTRAIT



ENOCH COBB WINES (American, 1806-1879) after graduation from Middlebury in 1827, and service in the U. S. navy, in 1832 became principal of the Edgehill school near Princeton, N. J. His address in 1837 before the constitutional convention of Pennsylvania was expanded into a volume, "Hints on a System of Popular Education". The legislatures of Pennsylvania and of New Jersey both ordered several hundred copies for distribution through their States. The same year he published "How shall I govern my School?" In 1838 he was made teacher in the high school of Philadelphia. In 1844 he opened a boarding-school near Burlington, N. J. In 1859 he became president of the university of St. Louis. In 1862 he began his greatest work as secretary of the New York prison association. In 1871 was sent to Europe by the government to establish an international prison congress. Sessions were held in 1872 and in 1877.



JOSEPH PADDOCK FAIRBANKS (American, 1806-1855), was engaged in manufacture of scales with his brothers at St. Johnsbury, Vt. From the first he was interested and active in benevolent work, and especially in education. As early as 1832 he began to assist young men to enter the ministry; in 1843 he united with his brothers in establishing the St. Johnsbury academy; and in 1845, being elected to the legislature, he made it his especial effort to improve the common schools. He secured the passage of a new school law, promoted educational associations, established the *Vermont School Journal*, and sought to secure in Vermont such an awakening as was occurring in Massachusetts under Horace Mann. In 1851, the political control changed, and no State superintendent was elected; and though he sought to secure the continuance of the office by subscription, the plan failed and the school law became inoperative.



EZRA CORNELL (American, 1807-1874), founder of Cornell university, built at 18 and without apprenticeship the two-story house in which his parents lived at DeRuyter, N. Y., and worked as a carpenter at Cortland and Syracuse. In 1828 he removed to Ithaca, where he became superintendent of a large milling business. In 1840 he travelled in the interest of a new plough, and in 1844 saved the telegraph from failure by suggesting the erection of poles for the wires. He built lines in Pennsylvania, New York, and Canada, and then in the west, and was one of the founders and for many years the largest stock-holder of the Western Union telegraph company. In 1861 and 1862 he was elected to the assembly, and was a State senator 1864-8. In 1863 he founded the Cornell free library at Ithaca, and in 1865 he gave half a million to endow Cornell University, on condition that it should have the agricultural land grant.



JOSEPH ALDEN (American, 1807-1885), 6th president of Jefferson college, and 4th principal of the Albany normal, after graduation from Union in 1829 taught for two years in Princeton while taking a theological course. After a year as pastor he became in 1835 professor of rhetoric in Williams. In 1852 he became professor of mental and moral science in Lafayette college, in 1857 president of Jefferson college, and in 1867 principal of the Albany normal, retiring in 1872. His works number some 70 titles, mostly Sunday school books, and his text-books have had large sales, "Elements of Intellectual Philosophy", "Science of Government", "Christian Ethics", and especially his "Political Economy", of which Andrew D. White said: "It is clear, well arranged, and the best treatise for the purpose I have ever seen." He was also for a time editor of *The New York Observer*, a well-known religious weekly.



SAMUEL HARVEY TAYLOR (American, 1807-1871), known to all graduates of Phillips Academy, Andover, as "Uncle Sam," became an assistant teacher there in 1834, and was principal there from 1837 to his death. He had an instinct for the government of boys, and his profound convictions, inflexible will, and strong sensibilities gave him an influence equalled by that of few American teachers. As a teacher, he united accuracy in the details of classical literature with an enthusiasm in its general spirit. His "Methods of Classical Study" (1861), set a high standard for other teachers, but represented well his own practice. He was in his element before his pupils, and summoned them to exertion with almost talismanic force. His aim was not to give knowledge, but to qualify them for getting it. He gave them inspiration for work, and was himself the hardest student in school.



LOUIS JOHN RUDOLPH AGASSIZ (Swiss, 1807-1873) pursued medical studies at Zurich, Heidelberg, and Munich, but with special reference to natural history, particularly botany. He was soon employed to describe specimens brought from Brazil of the fresh-water fishes of the Amazon. This led him to researches upon the fossil fish of the Alps, and he established a new system of classification. In 1840 he became interested in glaciers, upon which he became an authority. In 1846 he came to America, and in 1847 was appointed professor at Harvard, where he built up the museum of natural history. In 1865 and in 1871 he visited Brazil, and came home laden with treasures. Through the liberality of John Anderson, who gave him Penikese Island and a fund of \$50,000, he established a summer school of natural history there. To the last he rejected the doctrine of evolution, believing in independent creations.



ARNOLD HENRY GUYOT (Swiss, 1807-1884) was graduated at Berlin in 1835, and from 1839 to 1848 was the colleague of Agassiz at Neuchâtel, where he carried on extensive studies of the Alpine glaciers. He accompanied Agassiz to America in 1848, and was for a time a lecturer on physical geography in the schools and institutes of Massachusetts. His lectures before the Lowell Institute were published as "Earth and Man" (1853). From 1854 to his death he was professor of geography and geology at Princeton. He had the management of the meteorological department of the Smithsonian Institute, and often lectured there. He published a series of geographies and maps, and was one of editors of Johnson's Cyclopædia. He was the first to discover the laminated structure of the ice in glaciers, and to show that its motion is due to the displacement of its molecules, which render it plastic.



MARY CARPENTER (English, 1807-1877) in 1829 opened a school for girls at Bristol. A visit from the Rev. Joseph Tuckerman of Boston determined her work in life, and in 1835 she founded a working and visiting society, to improve the condition of the poor. In 1846 she opened a ragged-school. She published books on "Ragged Schools" (1849), and on "Reformatory Schools" (1851). In 1852 she opened a private reformatory school near Bristol, and in her "Juvenile Delinquents" (1853) pointed out the evils of existing modes of punishment. In 1849 she published the "Claims of Ragged Schools", and in 1861 was called to testify before parliament. In 1864 she published "Our Convicts", which at Rome was put on the Index Expurgatorius. In 1866 she went to India, and in 1868-9 was for six months principal of a women's normal school in Bombay. In 1873 she visited America, and in 1875 once more visited India.



JOSEPH PAYNE (English, 1808-1876) had limited advantages for education and at twenty became a private tutor at Camberwell, succeeding so well that parents placed other children under his charge and the Denmark Hill grammar school grew up. In 1845 he started a new school at Leatherhead, which for 18 years was regarded as one of the best private schools in England. On his retirement in 1863 he devoted himself to educational progress, especially with reference to the broader education of women and the professional preparation of the teacher. He was the first incumbent of the pedagogical chair founded by the College of Preceptors, and his "Lectures on the Science and Art of Education" in book form are still regarded as among the best treatises on the subject. His "Lectures on the History of Education, with a Visit to German Schools" was published after his death, and he was the author of several text-books.



DANIEL GOTTLIEB MOR. SCHREBER (German, 1808-1861), noted for his services in behalf of physical education, after being educated at Leipzig was from 1843 to 1859 physician in the Carus orthopaedic hospital. He exerted great influence in the reform of educational methods, especially in the direction of physical education. He made the expression "health gymnastics" (Heilgymnastik) a familiar word. His most famous work is "Aerztliche Zimmergymnastik" (24th ed. 1890), of which an American translation under the title "Gymnastics for Health and Cure" is in common use. Other books are "Das Buch der Gesundheit" (1839), "Kallipädie oder Erziehung zur Schönheit" (1858), "Das Buch der Erziehung" (1891), "Kinesiatrik oder die gymnastische Heilmethode" (1852), "Die schädlichen Körperhaltungen und Gewohnheiten der Kinder" (1853), "Die plaumässige Schärfung der Sinnesorgane" (1859).



FRANCIS DWIGHT (American, 1808-1845), was born in Massachusetts, but in 1838 removed to New York, where he established in 1840 *The District School Journal*. Under his editorship this journal was until his death the focus which attracted and cemented all the elements in the State favorable to advance in education. His modest deportment and captivating manners won friends on every hand. He was prominent in establishing the normal school, county supervision, and conventions of teachers. His journal was sent by the Legislature to every district in the State, and it educated the people at large to the economy of a larger expenditure for better schools. He threw himself heart and soul into the cause, and his enthusiasm was infectious. He was foremost among those who made New York recognized as foremost in education. His death was a great loss to the State.



SAMUEL S. RANDALL (American, 1809-1881) after study at Hamilton college was admitted to the bar in 1834. He became clerk in the New York department of public instruction under Gov. Dix, in 1841 was made deputy superintendent, and in October became acting superintendent, his chief being made secretary of war. He was again appointed deputy in 1849. In 1851 he was made commissioner to codify the school law of the State, and in 1853 was again elected deputy. In 1854, his recommendation that the office of the superintendent be separate from that of secretary of state was adopted, and it was supposed that he would be the first superintendent but by a political trick Victor M. Rice was elected instead. Mr. Randall was made deputy, but in June, 1854, was elected first superintendent of schools in New York city. He resigned in 1870 on account of failing health. He was author of a history of the common schools of New York.



FREDERICK AUGUSTUS PORTER BARNARD (American, 1809-1889) after graduation in 1818 from Yale, where he showed remarkable aptitude for mathematics, became a master in the Hartford Latin school, and in 1830 was made tutor at Yale. After a year he taught in the deaf and dumb asylums in Hartford and in New York, and in 1838 became professor of mathematics in the university of Alabama. Here he defended the established curriculum against the elective system and against the dormitory system. In 1854 he became professor of mathematics in the university of Mississippi, and in 1856 was made president, resigning when the war broke out in 1861. After work on the coast survey, he was in 1864 elected president of Columbia college, where he remained till death. The women's department is named Barnard college in honor of his efforts for the higher education of women.



JOHN STUART BLACKIE (Scotch, 1800-1895) after education at Aberdeen, Edinburgh, and abroad, was admitted to the bar in 1834, but published that year a metrical translation of *Faust*, and contributed much to the magazines. In 1841 he became professor of Latin literature at Aberdeen, and in 1852 of Greek at Edinburgh. This last he considered the great language, and he had the best Greek library in Great Britain. But he was in other ways the most notable public figure in Scotland. He was prominent in the movement for university reform, and was a warm advocate of Scotch nationality, securing a Celtic chair at Edinburgh. He was unconventional in attire and manner, but an enormous power, in college and out; and though he retired from teaching in 1882, he was at 85 still a boy in feeling and often in expression. His writings were voluminous, the best-known in America being his "Self-Culture".



CHARLES ROBERT DARWIN (English, 1809-), the naturalist, after graduation in 1831 from Cambridge sailed as a volunteer naturalist to the coast of South America. After his return in 1836 he published a "Journal of Researches" (1839), "Zoology of the Voyage of the Beagle" (1840-42), "Coral Reefs" (1842), "Volcanic Islands" (1844), "Geological Observations" (1846), and "A Monograph of the Cirripedia" (1851-53). But his "Origin of Species by means of Natural Selection" (1859) made him the most famous scientist of the century, leading first to violent attacks, but finally to general acceptance of his theory. "The Descent of Man" (1871) is a continuation of that work. Among his other works are "The Variations of Animals and Plants under Domestication" (1868), "The Expression of the Emotions in Men and Animals" (1872), "The Effects of Cross and Self Fertilization" (1876), etc.



DAVID PERKINS PAGE (American, 1810-1848), was born at Epping, N. H. ; taught in small schools for four years; at 21 became the vice-principal of the school at Newburyport, Mass. ; and at 34 was made principal of the new State Normal school at Albany, N. Y. On his way to Albany, he called on Horace Mann, whose parting words were: "Succeed, or die." He succeeded and died, for after three years he laid down the burden he had borne too zealously. He labored indefatigably. Against the assaults upon the normal school he interposed able, manly, courteous defences; those levelled at himself he bore in silence; but no man, however bitter his hostility, ever came within the magnetism of Mr. Page's presence and influence without being changed from an enemy to a friend. His influence lives in his "Theory and Practice of Teaching," the most popular of all American books on pedagogy.



JOHN SEELY HART (American, 1810-1877) after graduation from Princeton in 1830 and employment there as an instructor became in 1836 proprietor of the Edgehill school, and in 1842 principal of the central high school of Philadelphia, succeeding A. D. Bache, where he remained 17 years. In 1859 he became editor of the publications of the American Sunday School Union, in 1863 principal of the New Jersey State normal school, and in 1872 professor of rhetoric and English at Princeton. He was a voluminous writer, his most successful text-book being his rhetoric. In 1844 he was editor of the *Pa. Common School Journal*, and from 1849 to 1851, of *Sartain's Magazine*. His annual reports of the Philadelphia high school have much statistical information, and his ideas on organization and supervision are valuable. In 1851 he edited the "Female Prose Writers of America".



SAMUEL CLARK (English, 1810-1875) was obliged to give up school for business at Southampton before he was 14, but by private reading had acquired large knowledge and ready expression. In 1836 he became publisher of the *Educational Magazine* in London, where he became acquainted with F. D. Maurice, whom he afterward assisted to establish Queens college. While still in business he began study at Oxford in 1839, and was graduated in 1846. He was made chaplain of St. Mark's training college, Chelsea, and threw himself heartily into the work, becoming vice-principal. From 1851 to 1862 he was principal of the Battersea training college, which he made first of the normal schools in the kingdom. At the Exhibition of 1862 he was one of the judges in the educational department, and he had a prominent part in drawing up the revised code. He compiled a Bible atlas, and wrote parts of the "Speaker's Commentary".



ASA GRAY (American, 1810-1888) was born at Paris, N. Y., and graduated from the Fairfield medical school in 1813, but soon gave up practice to devote himself to botany. In 1834 he was made botanist to the U. S. exploring expedition to the southern seas, but on account of delay resigned. From 1842 to 1873 he was professor of natural history at Harvard, and after resignation retained charge of the great herbarium he had given to the university in 1864. In 1874 he succeeded Agassiz as regent of the Smithsonian institution. He was probably the first botanist of his century. In conjunction with Dr. John Torrey he was the first to arrange species upon the natural basis of affinity, and he became an influential supporter of the Darwinian theory. In 1838 he published with Dr. Torrey the "Flora of North America", and many other works followed, including a series of text-books still regarded the best.



IN 1858

HENRY BARNARD (American, 1811-1900) after graduation from Yale in 1838 studied law, but was State superintendent of schools of Connecticut 1838-42, of Rhode Island 1843-9, of Connecticut again 1851-5. He was Chancellor of the University of Wisconsin 1858-60, and in 1866 president of St. John's college, Md. From 1867 to 1870 he was United States commissioner of education. He is best known, however, as editor of the *American Journal of Education*. It contains 29 volumes of 800 closely-printed pages each, and covers almost every topic, giving translations of foreign books not elsewhere to be found. The volumes are numbered 1-30, but Vol. 25 was never published. Vol. 18 is the American Yearbook for 1869; Vol. 19 a special report of the District of Columbia; Vol. 21 a report on technical schools; and Vol. 29 the report of the commissioner of education for 1877. There are also scores of reprints under various titles.

1900]

HENRY BARNARD

191



IN 1870



IN 1894



DOMINGO FAUSTINO SARMIENTO (Argentinian, 1811-1888) was born in the first year of the revolution that finally gave liberty to the republic, and became a noted writer, orator, and legislator. He was minister of the Argentine republic to the United States, when in 1868 he was elected president of the republic for a term of six years. He had been greatly interested in the school system of the United States, and in a letter to Charles Sumner, published in the *Massachusetts Teacher* for Aug., 1868, he speaks of the school as the basis of the American constitution. Although during his presidency the republic was engaged in war, and an insurrection broke out, he devoted himself so successfully to building up a system of public education that the anniversary of his death is a marked day in the school calendar. The *Evolucion Educativa* for Sept. 15, 1899, is largely devoted to the story of his life.



JAMES McCOSH (Scotch, 1811-1894), 11th president of Princeton, after education at Glasgow and Edinburgh got an honorary A. M. from the latter on motion of Sir Wm. Hamilton for an essay on the Stoic philosophy. He preached from 1835-1851, and wrote "Method of Divine Government" (1850), which so interested the lord-lieutenant of Ireland that the author was made professor of logic at Queen's college, Belfast. He came to America as president of Princeton in 1868, resigning in 1888 after a most successful administration. He had great influence upon philosophical thought, his philosophy being, Prof. Baldwin says, a development of the Scottish realism, but going farther than Reid in asserting the direct cognition of realities of all kinds. He very early accepted the doctrine of biological evolution. Among his many works are "Logic" (1869), "The Emotions" (1880), "Psychology" (1886), "Philosophy of Reality" (1894).



JOHN WILLIAM DRAPER (English, 1811-1882), 2d president of the New York university medical college, was educated in of London, but came to America in 1833, and became M.D. of the University of Pennsylvania in 1836. He was professor of chemistry in Hampton-Sidney college 1836-39, in New York university 1829-41, and in the medical department 1841-50. He was president 1850-73. In 1839 he took by Daguerre's process the first photographic portrait ever taken from life. In 1840 he took the first photograph of the moon, and he was associated with S. F. B. Morse in developing the telegraph. He discovered many of the fundamental facts of spectrum analysis and published them 1841-50. The titles of his papers (1832-50) exceed 100. His "History of the Conflict between Religion and Science" (1874) has been translated into 9 languages. Other books are "Human Physiology" (1856), "Intellectual Development of Europe" (1863), etc.



JOHN VAN SCHAICK LANSING BRUYN (American, 1811-1878) after graduation from the Albany academy was admitted to the bar in 1832. He was appointed by Gov. Marcy master in chancery, and afterward became injunction master of the third circuit. He became counsel for the New York Central railway. He was State senator 1862-3, and representative to congress, 1863-5 and 1867-9. He was a regent of the Smithsonian Institution. In 1866 he suggested the formation of the State board of charities, and was president until his death. He was one of the original commissioners of the new capitol, and laid its foundation stone. He became a regent of the University of New York in 1844, and from 1862 to his death was its chancellor. After the annual Convocations were established in 1863, his receptions were among the most important features of the meetings, at which he made an ideal presiding officer.



ELIAS LOOMIS (American, 1811-1889) scientist, after graduation from Yale in 1830 was a tutor there, 1833-36. He was the first American to see the return of Halley's comet in 1835 and published an account of it. In 1836-7 he studied in Paris. In 1837 became professor of natural philosophy in Western Reserve college, in 1844 of mathematics in New York university, and in 1860 of astronomy in Yale, where he remained till his death. He was distinguished for careful observations in astronomy, meteorology, and magnetism, with important results. As an instructor he was noted for compelling his students to investigate for themselves. Sometimes a student would come to him with a supposed mistake in the textbook. "Will you please read it again?" he would say again and again, till finally the student saw his own error, when a smile would stretch across Prof. Loomis's face like a rising sun.



SIR WILLIAM ROBERT GROVE (Welch, 1811—) after graduation from Oxford in 1833 studied law, but became interested in electricity and was from 1835 to 1840 professor of natural philosophy in the London Institution. In 1839 he communicated to the French Academy his invention of the Grove battery, which substitutes platinum for copper and nitric for sulphuric acid. In 1841 he published a paper on electrotyping, and in 1842 enunciated the doctrine of the correlation of physical forces, showing that arrested motion produces heat. His book on the subject was published in 1847, and is his principal contribution to science. In 1866 he was president of the British Association. Having resumed the practice of law, he became in 1853 queen's counsel, and in 1871 justice of the common pleas. He was knighted in 1871. He is one of the few men who have been eminent both in science and in a chosen profession.



EDWARD SEGUIN (French, 1812-1880) came from ancestors who had been physicians for generations. After education in Paris he studied medicine under Itard and Esquirol, and was led to the study of idiocy, which he discovered to be not malformation of the brain, but arrested development. He established a school for them in Paris, and joined a brilliant coterie of young men, including Ledru Rollin, Louis Blanc, and Victor Hugo, who believed in a republic founded on the teachings of St. Simon. He published in 1846 his treatise on idiocy which was crowned by the Academy, and is still its text-book. In 1850 he came to America and practised as a physician, but did much for the feeble-minded, and from 1854 to 1857 assisted Dr. Wilbur in the institution at Syracuse, N. Y. He published "Idiocy and its treatment by the Physiological Method" and several other books, and established in New York a school for the feeble-minded.



CHARLES HARTSHORN ANTHONY (1812-1874), a famous Albany teacher, after graduation from the Troy (N. Y.) academy at 15 began lecturing there on geology and botany. In 1831 he established a private high school, which in 1831 he became the Troy academy. In 1837 this was merged with the Rensselaer polytechnic institute as the department of classical literature, but the union was not carried into effect, and Mr. Anthony continued to be principal until 1839, when he was made principal of the Troy public high school. In 1840 this school was suspended, and he removed to Albany and established a private school there. In 1846 he established the Albany classical institute, and remained in charge of it for 20 years, continuing afterward to visit almost daily, and to lecture at least once a week, until Jan. 2, 1872, when he was seized by an attack that left the right half of his body paralyzed.



JOHN W. ARMSTRONG (English, 1812-1878), 1st principal of Fredonia, accompanied his father to Canada in 1824, and in 1837 came to Cazenovia seminary, N. Y. In 1839 he taught at Nichols, and after private work in Canada, in 1841 at Red Creek. He was licensed as a local preacher, but was principal of the Gouverneur Wesleyan 1844-50, when he came back to Cazenovia as a student teacher of science. In 1854 he became principal of Falley seminary, and in 1855 of the Susquehanna seminary at Binghamton. In 1856 he resumed pastoral work, and in 1857 was sent to Amenia seminary in an unsuccessful attempt to save it from sale. After pastoral work, 1857-65, he became headmaster and teacher of science in the Oswego normal, and in 1869 was made principal of the Fredonia normal, where he remained till death. He was president of the association of normal principals from its organization in 1869.



JAMES NAPOLEON McELLIGOTT (American, 1812-1866), a prominent New York school man, after education at New York university became instructor in and in 1845 principal of the Mechanics society institute. In 1849 he opened a private classical school, which he conducted with signal success till his death. In 1848 he was editor of *The Teachers Advocate*, and in 1860 was president of the State teachers association. He coöperated in the preparation of the Union readers, and he was the author of "Manual, Analytical and Synthetical, of Orthography and Definition" (1845), "Oldham's Humorous Speaker" (1853), and "The American Debater" (1855). At the time of his death he was engaged upon a Latin grammar, and was to have followed with a Greek grammar. He was for 16 years corresponding secretary of the American Sunday School Union, and was active in church and benevolent work.



JAMES DWIGHT DANA (American, 1813-1896) was born in Utica, N. Y., and after graduation from Yale in 1833 travelled for two years in the Mediterranean as instructor of midshipmen in the U. S. navy. In 1836-38 he was assistant at Yale to Prof. Silliman, and in 1838-42 took part in the Wilkes exploring expedition, of which his reports on geology, corals, and crustaceans were published 1846-54. In 1846 he was made professor of geology at Yale. He had already published a "System of Mineralogy" (1837), and a "Manual of Mineralogy" (1848), and in 1864 he published his "Text-Book of Geology", so much the best book of its kind that a German geologist advised his students to learn English in order to use this book. Personally he was one of the simplest and most lovable of men, as ready to take a walk with freshmen and point out geological A-B-C's as to preside over the Academy of science.



MARCUS WILLSON (American, 1813-) after graduation from Union in 1836 taught at Fishkill Landing and for four years in the Poughkeepsie collegiate school, and was principal of Canandaigua academy 1849-1853, but he declined the presidency of Vassar. He was also admitted to the bar, but his principal work was as an author. His first work was a civil government, followed by American histories, a universal history, and a set of science readers on which he spent four years, and afterward another set of readers. For copyright on text-books he was paid more than \$200,000 by the Harper Brothers alone, with large amounts from other publishers. He also wrote "The Wonderful Story of Old", an illustrated Bible work. He delivered his first written temperance address at the age of 18, and was prevented from practising law by the injury to his voice from speaking on a cold winter's night.



WILLIAM BENJAMIN CARPENTER (English, 1813-1885), famous for his work in comparative physiology, brother of Mary Carpenter the philanthropist, studied medicine at University college and at Edinburgh, and began practice in Bristol. He became a contributor to the magazines, and subsequently editor of the *British and Medical Foreign Review*. In 1837 he gained the Edinburgh prize of \$150 for the best essay of the year, and bought a microscope, which enabled him to write his "General and Comparative Physiology" (1838). In 1844 he became professor of physiology in the Royal institution, London, and published his "Comparative Physiology" and "Human Physiology". He was professor of medical jurisprudence at University college 1849-59, principal of University hall, 1851-59, and in 1856 became registrar of the University of London in the development of which he was the chief worker.



SIR ISAAC PITMAN (English, 1813-), the inventor of phonography, became at 12 a clerk in a counting-house, and at 18 was sent to the normal college of the British and Foreign School Society. After five months training he became master of a public school, and subsequently established a school at Barton-on-Humber. Here he began to study shorthand, and published his "Stenographic Sound Hand" in 1837. In 1842 he began the *Phonetic Journal*, and in 1843 established a Phonographic Institute. Besides his text-books he issued a library of some eighty volumes printed entirely in short-hand. In 1894 the Queen conferred upon him the honor of knighthood. Dr. Wm. T. Harris says: "All short-hand writers in the world concede the debt of gratitude due to Isaac Pitman as the original inventor of the best system of short-hand, and the one which forms the basis for a hundred or more modifications."



EMILY ANNE ELIZA SHIRREFF (English, 1814-1897), with her sister Mrs. Grey a foremost champion of the higher education of women, was the daughter of an admiral, and while residing at Gibraltar reflected on how little her education had done for her, and resolved that other women should have a better chance. In 1850 the two sisters published "Thoughts on Self-Culture", and in 1858 "The Intellectual Education of Women". In 1871 they formed the National Union for the Education of Women, in 1872 the Girls' Public Day School Co., and in 1877 the Teachers' Training and Registration Society. In 1876 Miss Shirreff became president of the Froebel Society, and published "Principles of the Kindergarten System", republished in 1880 as "The Kindergarten", and republished in America. In 1877 appeared her "Sketch of Froebel's Life", in 1882 "The Kindergarten at Home", and in 1892, "Moral Training".



JAMES JOSEPH SYLVESTER (English, 1814-1897), "great as a maker of mathematicians no less than of mathematics", after education at Cambridge and Dublin became in 1837 professor of natural philosophy at University college, London. In 1841 he became professor of mathematics in the University of Virginia, but returned to England in 1845, and was for ten years connected with a firm of insurance actuaries. From 1855 to 1870 he was professor of mathematics at the Royal military academy, Woolwich. Upon the founding of the Johns Hopkins university in 1877 he was made professor of mathematics, where he remained till in 1883 he became professor of geometry at Oxford, remaining till in 1894 he retired on account of failing health. His writings cover some 2,500 quarto pages, and many a single memoir among them would have made him eminent. In oral expression also he riveted attention



MARTIN BREWER ANDERSON (American, 1815-1890) after graduation from Waterville college in 1840 and a year at Newton, returned to Waterville as tutor and professor. In 1850 he became proprietor of the *New York Recorder*, and in 1853 he became president of the University of Rochester. In 1870 he was elected president of Brown university, and when the Fredonia normal was started, was offered \$5,000 a year to accept the presidency; but he remained at Rochester till failing health compelled him in 1889 to withdraw. He was one of the few ideal college-presidents--a man of commanding presence and strong personality, who made himself felt by every student. A man might take a course under him and still be small-minded, but not without discovering that he was small-minded. His discussion of current events was in itself worth the entire senior year in college.

4



MYRTILLA MINER (American, 1815-1864) was born in Brookfield, N. Y. In spite of spinal disease she began teaching at 15, and after service in Rochester and Providence went to Mississippi to instruct a private school for planters' daughters. She became interested in the education of negroes, and as she could not teach them there she went to Washington to found a normal school for colored girls. She began in 1851, with a capital of \$100, in a hired room with 6 pupils. In 1853 she bought a whole city square for \$4,300 (sold in 1872 for \$40,000), Harriet Beecher Stowe giving her \$1,000 from proceeds of "Uncle Tom's Cabin" and other friends contributing. From 1857 to 1859 she was ill, and transferred the care of the school to Emily Howland of Sherwood, N. Y., while she travelled to get money for a building. The school was incorporated in 1863, and the Miner normal school was transferred in 1877 to a building costing \$37,000.



ASA DEARBORN LORD (American, 1816-1874), 1st superintendent at Columbus, Ohio, after education in the academy at Potsdam, N. Y., taught in district schools, and in 1837 in a private school at Willoughby, Ohio. He was principal of the Western Reserve teachers seminary 1839-47, sending out some 800 teachers. In 1847 he became the first superintendent of schools in Columbus and inaugurated a system of graded schools that soon spread over the State. In 1846 he began publishing *The Ohio School Journal*, which became in 1850 *The School Friend*. When this was discontinued he edited *The Public School Advocate* for a year till *The Ohio Journal of Education* was begun, and of this was resident editor to the close of the first volume in 1856. In 1854 he succeeded Lorin Andrews as agent of the Ohio State teachers association. In 1856 became head of the Ohio Institution for the blind, and in 1868 of that at Batavia, N. Y.



MARY MORTIMER (English, 1816-1877), 1st principal of the Milwaukee female college, came with her family to America when four years old, and lived in Waterloo, N. Y. At 16 began teaching, and in 1841 became principal of the female department of the Brockport collegiate institute. In 1846 she became a teacher in the LeRoy female seminary, and in 1850 entered upon her life work in the establishment of the Milwaukee female college, in which Catharine Beecher was deeply interested. Miss Mortimer took charge of the normal department. In 1852 she became one of the managers of the American women's educational association. In 1857 she took a private school in Elmira, and in 1859 went to the female seminary at Baraboo, Wis., resigning in 1863 on account of ill-health. In 1866 she became once more the head of the Milwaukee female college, resigning in 1874, to retire to quiet country life.



NOAH T. CLARKE (American, 1817-1898), the Nestor of New York teachers, had only an academic education, but in 1841 became assistant in Canandaigua academy, and in 1853 succeeded Marcus Willson as principal. This place he held until 1882, serving 41 years in the same school. In this position he wielded remarkable influence for the upbuilding of young men. He was so thoroughly a man, so typically a gentleman, so sympathetic and helpful and inspiring, that many a boy was lifted by contact with him out of the commonplace into the ideal, and carried on to high worth and usefulness. He was prominent in all teachers associations, and always a valued counselor and a happy speaker. There was not another teacher in the State the announcement of whose death could dim so many eyes, and his memory is revered by hundreds who feel that much that is best in them came from his influence.



ANOTHER PORTRAIT



BENJAMIN JOWETT (English, 1817-1893) was born at Camberwell, London. He was a lonely boy, and his early life was a struggle. But he was graduated from Oxford, and became regius professor of Greek, for a time without salary. In 1870 he was made master of Balliol college, and in 1882 vice-chancellor of the university, rendering eminent service in all these offices. He is perhaps the only teacher of his day to be compared with Thomas Arnold. He had "a little figure with a high forehead and whitening hair and the look of a saint". He was a famous classical scholar: his translations of Plato, Thucydides, and Aristotle are beyond comparison the best published. For he was also a master of English prose. Walter Pater says: "He seemed to have taken the measure not merely of all opinions, but of all possible ones, and to have put the last refinements on literary expression."



ALEXANDER BAIN (Scotch, 1818-), the apostle of physical psychology, after graduation from Aberdeen university in 1840 taught there till in 1845 he was made professor of physics in the Andersonian university, Glasgow. From 1847 to 1850 he was assistant secretary of the Metropolitan sanitary commission, from 1857 to 1862, and from 1864 to 1869 he was examiner in logic and moral philosophy in the University of London, and in 1860 he became professor of logic in the University of Aberdeen. He had done much writing when in "The Senses and the Intellect" (1855) and "The Emotions and the Will" (1859) he made public his views of psychology, based upon the study of mental effects from their physical side. Later works are "The Study of Character" (1861), "Mental and Moral Science" (1866), "Logic, Deductive and Inductive" (1870), "Mind and Body" (1873), and "Education as a Science" (1878).



HENRY DRISLER (American, 1818-1897) after graduation from Columbia in 1839 became classical instructor in the grammar school. In 1843 he was made tutor and in 1845 adjunct professor in classics. In 1857 he became professor of Latin, and in 1867 he succeeded Dr. Anthon as professor of Greek. During Dr. Barnard's absence in 1878 and after his death in 1879, Prof. Drisler acted as president until the election of President Low, when he became dean of the school of arts. He retired in 1894, and the Drisler professorship of classical philology was founded in his honor. He collaborated with Prof. Anthon in many of his text-books, prepared an enlarged edition of Yonge's English-Greek dictionary, assisted in the compilation of Johnson's encyclopædia, and was an associate editor of the Oxford edition of Liddell & Scott's Greek dictionary (1883). He was the general editor of the Harper editions of classics.



MARIA MITCHELL (American, 1818-1889), assisted her father, who taught school in Nantucket, Mass., in his astronomical studies. Later she studied under Charles Peirce, and became his assistant in his school at Nantucket. She was appointed librarian of the Nantucket athenaeum. She continued her astronomical studies, and gave special attention to nebulæ and comets. She received in 1847 a gold medal from the king of Denmark for the discovery of a comet, a memoir on which she published in the Smithsonian contributions. She was employed upon the coast survey and as one of the computers upon the nautical almanac. She visited Europe in 1858, and on her return received through Elizabeth Peabody the gift of a large telescope. In 1865 she became professor of astronomy at Vassar, where she continued a systematic series of scientific observations, and exerted a powerful influence through her marked personality.



EBENEZER DODGE (American, 1819-1890), 4th president of Colgate university, after graduation from Brown in 1840 taught two years in Shelburne Falls, Mass., and was graduated from Newton in 1845. After a year as instructor in Hebrew in Kentucky, he was pastor for 7 years in New Hampshire, and became professor at Colgate in 1853 of biblical criticism, and in 1861 of christian theology. In 1868 he was elected president, and so remained till his death. This period was one of prosperity for the university, due largely to the confidence inspired by his profound scholarship and high character, and is recorded in "The first Half Century of Colgate University" (1872). He was a man of profound thought and broad views, and stood in the front rank of Baptist theologians. He was a power in debate, and exerted strong personal influence. He published "Evidences of Christianity" (1868) and "Lectures on Christian Theology" (1883),



FREDERICK DAN HUNTINGTON (American, 1819-), after graduation from Amherst in 1839, studied theology at Cambridge, and in 1842 became pastor of the South church, Boston. In 1855 he was chosen preacher and professor of Christian morals at Harvard. His theological views changed, and in 1860 he was admitted to the Episcopal ministry. In 1864 he resigned his office at Harvard to become rector of Emanuel church, Boston, and in 1869 he was elected bishop of Central New York. He was one of the founders of the *Church Monthly*, and has written several religious books. His greatest service to education is his address on "Unconscious Tuition", first delivered before the American Institute of Instruction in 1855, and since then known all over the world. For forty years it has been regarded the most stimulating and helpful book that can be put into a young teacher's hands.



WILLIAM EDWARD FORSTER (English, 1819-1886) married the eldest daughter of Thomas Arnold of Rugby, and in 1861 entered parliament. In 1868 he became vice-president of the Council on Education, entered Gladstone's cabinet in 1870, and introduced the Elementary Education bill. He showed by investigation that the voluntary system was inadequate, and his bill created school boards with power to levy rates for maintaining schools, and to compel attendance. No catechism or formulary of any religious denomination was permitted, and the schools were put under government inspection. In 1874 he visited the United States, and in 1875 was elected Lord Rector of Aberdeen university. In 1880 he became chief-secretary for Ireland, but resigned in 1882. "His undoubted patriotism, his great abilities, and his sturdy independence will give him an honorable place among British statesmen."



JOHN RUSKIN (English, 1819-1900) after graduation from Oxford in 1842 hesitated between the Church and art, but chose the latter, and in 1843 published the first volume of "Modern Painters", which immediately made him famous as an art critic. He declared his theory that nature must be followed implicitly, every alteration coming from powerless indolence or blind audacity; and he made Turner its chief exponent. He spent some years in Italy, but in 1858 became professor in the Cambridge school of art, in 1867 lecturer at Cambridge. He was professor of fine art at Oxford 1869-79 and 1883-85. The Ruskin museum at Sheffield contains his art treasures. Besides his numerous works on art, he did much for the social condition of workmen, his best-known lectures being gathered in "Fors Clavigera" (1871-84). In education he insisted on the dominance of moral ideas, and the essentialness of first-hand study.



CHARLES KINGSLEY (English, 1819-1875) after graduation from Cambridge became rector at Eversley in Hampshire, which was thereafter his home, and where he died. He was professor of English literature in Queens college, and from 1860 to 1869 he was professor of modern history at Cambridge. In 1845 he was appointed canon at Middleham, in 1863 at Chester, and in 1873 at Westminster. From the first he was keenly sensible of the wants of the poor, and he threw himself into the movement for Christian socialism headed by Frederick Maurice. In this spirit he wrote "Yeast" and "Alton Locke". In 1854 he wrote "Alexandria and her Schools", in 1869 "Madam How and Lady Why", in 1872 "Town Geology", in 1874 "Health and Education". Both as a writer and in his personal intercourse with men he was a stimulating teacher. As a novelist his chief power lay in description.



JOHN TYNDALL (English, 1820-1893), investigator of radiant heat, was educated in the national public schools, and in 1839 joined the Irish ordnance survey. In 1841 an official suggested to him better use of his leisure hours, and for twelve years he was always at his books by five o'clock in the morning. In 1844 he became a railway engineer, but gave it up in 1847 to teach in Queenswood college. In 1848 he went to the University of Marburg to study under Bunsen, being graduated in 1850. In 1853 he became professor of natural philosophy in the Royal institution, where he was the colleague of Faraday. In 1867 he succeeded Faraday as superintendent. In 1849 he visited the Alps, and thereafter became an enthusiastic mountain climber, and made important researches as to glaciers. From 1859 to 1871 he studied radiant heat and established new theories. He was a famous lecturer, and delivered a course in America, 1873-4.



HERBERT SPENCER (English, 1820—) is the son of a private teacher, his grandfather and his uncle being also teachers. He did not learn to read till he was seven, but was encouraged to keep insects through their transformations, and to draw from objects. He was educated to be a civil engineer and in 1838 became an assistant on one of the railways. In 1848 he began writing "Social Statistics," and completed the first volume in 1850, having become in the mean time sub-editor of *The Economist*. In 1855 he published "The Principles of Psychology," and though his health gave way for the time, he has continued the work laid out, and published volume after volume of his philosophical undertaking. His "Education, Intellectual, Moral and Physical" is one of the few great books upon the subject, and has influenced all subsequent discussions.



CHARLES T. POOLER (American, 1820-1897) for many years an institute instructor, after graduation from Wesleyan in 1844 became principal of the Middletown high school, and afterward taught in Canton and Ogdensburg, N. Y. He was admitted to the bar in 1849, but taught for three years in Potsdam, and then opened a private academy which he continued for four years. He was superintendent of schools in Akron, O., 1857-60, principal of Deansville academy 1860-63, and school commissioner 1863-72, after which he gave himself entirely to conducting institutes. He conducted his first institute in 1860, and had continued the work since. He was the first president of the State association of school commissioners. He published "A Chart of Civil Government", and "Hints on Teaching Orthoëpy". His work was especially directed to the practical assistance of country school teachers, whose limitations he never forgot.



EDWARD NORTH (American, 1820—), after graduation from Hamilton in 1843 was for a year a private tutor, and then read law, but in 1841 was elected professor of ancient languages at Hamilton, where he has been for more than half a century a powerful and healthful influence upon every student. As a teacher of Greek he has made the language loved for his sake as well as for its own. He illustrated one of the peculiarities of his teaching in a paper before the University convocation in 1863 on "Use of the Black-board in teaching Greek". In 1845 he was one of the founders of the State teachers association, and in 1865 its president. Since 1855 he has been the necrologist of the Hamilton alumni, and since 1856 has edited *Alumniana* in the *Hamilton Monthly*. He was also for several years necrologist of the University convocation. His memory extends over every Hamilton graduate of the last 60 years.



HERVEY BACKUS WILBUR (American, 1820-1883). 1st superintendent of the Syracuse institution for the feeble-minded, after graduation from Amherst in 1838 and the Berkshire medical institution in 1842. studied engineering, and practised medicine at Lowell and at Barre, Mass. In 1847 he read of Dr. Seguin's school for training idiots, and sent for his book, which led Dr. Wilbur to establish first a school in his own house, and afterward an experimental school at Albany, which in 1854 became the State institution in Syracuse. Dr. Wilbur was made superintendent, and Dr. Seguin afterward worked for a time with him. In 1871 he published a paper arguing that moral causes were often productive of insanity, and that moral treatment should be largely used for remedy, which led to a long controversy. His report that English methods of managing the insane were in many ways superior led to many reforms.



SAMUEL G. LOVE (American, 1821-1893), for 25 years superintendent at Jamestown, N. Y., after graduation from Hamilton in 1846, studied law, but became a teacher in Buffalo. He afterward taught at Gowanda, was principal of Chamberlain institute 1850-53 and 1859-64, and in 1865 became superintendent at Jamestown, resigning in 1890 to become librarian. He made the Jamestown schools remarkable for being in advance of other schools of the times. He introduced physical culture, vocal music, and manual training long before they were usually thought practicable. He was a naturalist and gathered a large museum. He was a leader in associations, and through his training classes sent out young men and women inspired with enthusiasm for teaching. His reports were valuable documents, and his printed addresses were widely read. He published "Industrial Education, a Guide to Manual Training" (1887).



EDWARD TRING (English, 1821-1899), who ranks second only to Thomas Arnold among the English schoolmasters of this century, became head-master of Uppingham School in 1853. It was then a school-house and schoolroom with 25 pupils, which had grown in 1887 so as to employ a staff of 33 masters. He was a rigid disciplinarian, and insisted that if one boy did wrong it was because the rest approved, and punished them all. But he had intense feeling for the worth of a life,—of every life; and he spared nothing to give to every boy that individual training which would do most to develop the best in him to its highest. His pervading humor was also a power. His best known work is "Education and School" (1867). A volume of his "Addresses" was published in 1890, and "Uppingham Lyrics" in 1887. "A Memory of Edward Thring," by John Huntley Skrine was published in 1899.



THEODORE WILLIAM DWIGHT (American, 1822-1892), 1st warden of the Columbia law school, after graduation from Hamilton in 1840 and the Yale law school in 1842 became in 1846 professor of law at Hamilton, and in 1858 at Columbia, where he was soon made warden of the law school, and became recognized as one of the great teachers of the century. He was elected non-resident professor of constitutional law at Cornell (1868), and lecturer at Amherst (1869). He was a member of the New York constitutional convention of 1867, vice-president of the New York State commissioners of public charities, president of the New York prison association, and a member of the "committee of seventy" of New York city. In 1874 he was made a judge of the commission of appeals. Besides his legal works he joined with Dr. Wines in publishing "Prisons and Reformatories in the United States".



NORMAN ALLISON CALKINS (American, 1822-1895) became a teacher at 18, first at Castile, N. Y., and then at Gainesville, where he became principal. In 1845-6 he was town superintendent. In 1846 he removed to New York, and conducted teachers institutes. From 1862 to his death he was assistant superintendent of schools in New York. He was also professor of methods and principles of teaching in the Saturday sessions of the Normal college, 1870-80. He was president of the N. E. A. in 1886, and always one of its most trusted counsellors. He was treasurer of the American Congregational union 1857-83. He published *The Student* for ten years, and was the author of several text-books, including "Primary Object Lessons" (1861, 1870), "Phonic Charts" (1869), "Manual of Object Teaching" (1881), "From Blackboard to Books" (1883). He selected and classified Prang's natural history series (1873).

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BENN PITMAN (English, 1822—) with two other brothers of Sir Isaac Pitman, whose "Stenographic Sound Hand" was published in 1837, was from 1842 to 1852 associated with Sir Isaac in travelling through England lecturing and giving lessons in phonography. In 1853 he came to America and founded the Phonographic Institute, Cincinnati. His first Manual was published in 1855, and by 1860 his first series of text-books was completed. Revised editions were issued in 1885 and in 1897. He has not followed the changes in vocalization made by Sir Isaac in 1857, but adheres to the original plan, as simpler. Graham also adheres to this plan while Munson adopts the changes of 1857. In 1893 the Benn Pitman system was used by more than one-third of all the teachers of short-hand in America. He was recorder of military commissions for the U. S. government, 1863 to 1867, and general reporter to 1873.



DANA POND COLBURN (American, 1823-1859), the mathematical author, after graduation from the Bridgewater normal in 1843 taught district schools in Massachusetts and in East Greenwich, R. I. His teaching of arithmetic attracted the attention of Horace Mann, and in 1848 he was made one of the board of institute instructors. He was assistant in the Bridgewater normal 1848-50, and in 1852 opened a private normal school in Providence, R. I. In 1854 this became a State institution, and Mr. Colburn was made its first principal. He taught because he loved to teach, and his classes, though always hard working, abounded in joy and laughter. His "First Steps in Numbers" (1847) was followed by his "Decimal System", "Interest and Discount", "Arithmetic and its Applications" (1855), "Common School Arithmetic" (1858), "Child's Book of Arithmetic", and "Intellectual Arithmetic" (1859).



EDWARD AUGUSTUS FREEMAN (English, 1823-1892), the historian, after becoming scholar at Oxford in 1841, fellow in 1845, and examiner in 1857, 1863, and 1873, in 1884 became Regius professor of modern history. His historical works are numerous, including "History of the Saracens" (1856), "History of Federal Government" (1863), "History of the Norman Conquest" (1867-72), "Old English History" (1869), "Historical Essays" (1871-73, 1892), "General Sketch of European History" (1872), "Growth of the English Constitution" (1873), "The Ottoman Power in Europe" (1877), "The Historical Geography of Europe" (1881), "The Reign of William Rufus" (1882), "Chief Periods of European History" (1886), "Methods of Historical Study" (1885), "George Washington" (1888), "William the Conqueror" (1888), "The History of Sicily" (1891-92); besides works on architecture, and "Lectures to American Audiences" (1883).



FRIEDRICH MAX-MÜLLER (German, 1823-1900), son of the distinguished lyric poet, after graduation from Leipzig in 1843 made Sanskrit his special pursuit. He went to London, and in 1847 was commissioned by the East India company to edit the Rig-Veda at their expense. In 1850 he became professor at Oxford of modern languages; in 1866 of comparative philology. His treatises on philological topics have done more than those of any other single scholar to awaken interest in the science of language, the best known being "The Science of Language" (1861-3) and "Chips from a German Workshop" (1868-75). Inheriting his father's poetic imagination, he illustrates what are ordinarily dry subjects with a felicity that makes them attractive. The successful anonymous German novel "Deutsche Liebe" is also attributed to him. He was a commander of the Legion of Honor and member of the Privy Council.



JONATHAN ALLEN (American, 1823-1892) after graduation in 1846 from Oberlin became principal of Alfred Academy and secured for it a charter as Alfred University. He was elected the first president, but declined in favor of his elder colleague, Wm. C. Kenyon, becoming president upon Dr. Kenyon's retirement in 1867, holding that office till his death, a quarter of a century later. His especial pride was the Steinheim building, with its fine collection of minerals. He was also an influential clergyman, the organizer and for many years corresponding secretary of the Seventh-Day-Baptist Education Society, and several times president of the general conference of that denomination. In accordance with his wish his body was cremated, and the ashes were deposited in a Greek vase of white alabaster, one of the treasures of the Steinheim building. He impressed a genuine manhood upon two generations of students,



ANSON JUDD UPSON (American, 1823—), 12th chancellor of the University of the State of New York, after graduation from Hamilton in 1843 studied law, but in 1845 was elected tutor in Hamilton, and in 1849 adjunct professor, and in 1853 professor of logic, rhetoric, and elocution. Here he did much to maintain the high standard of oratory established by Prof. Mandeville. In 1868 he was ordained to the ministry, and from 1870 to 1880 was pastor of the 2d Presbyterian church, Albany; professor of rhetoric in the Auburn theological seminary 1880-87, and since then professor emeritus, taking up his residence in Glens Falls. In 1874 he was elected a regent of the University of the State of New York, and in 1892 became chancellor. Many of his sermons, addresses, and lectures have been published. He has been a frequent contributor to the periodical press, and is always a welcome speaker upon the platform.



EDWARD AUSTIN SHELDON (American, 1823-1897) after three years at Hamilton college had planned to study theology when he was made teacher of a school in Oswego for orphans and children of poor parents. In 1851 he became superintendent of schools in Syracuse, but in 1853 came back to Oswego as clerk of the board of education. While visiting Toronto he saw in the museum the appliances of the London Home and Colonial training school, and in 1859 he introduced object-lessons into the Oswego schools. He persuaded some of the teachers to give up half their salaries so as to bring over from London one of the Home and Colonial teachers, and in spite of opposition he succeeded in making object-teaching a recognized method. In 1869 the city training school became a State normal school, and he remained principal of it till his death. Here he accomplished a noble work for New York and for education everywhere.



M. A. NEWELL (Irish, 1824-1893), for nearly 25 years State superintendent of Maryland, after graduation from Trinity college, Dublin in 1845, taught two years in the Mechanics institute, Liverpool. In 1848 he came to Baltimore to visit relatives, became a private tutor, and afterward professor of natural sciences in the City college. Afterward he was for a time professor in Madison college, but came back to Baltimore and established a "Commercial and collegiate institute". The war made this unprofitable and he became principal of No. 1, afterward going to Pittsburgh to teach with his cousins in the Newell institute. In 1865 he became first principal of the State normal at Baltimore, and in 1867 State superintendent. He held both offices till 1890. Afterward for many years he conducted the *Maryland School Journal*, he edited a series of readers, did institute work, and in 1876 was president of the N. E. A.



JAMES JOHONNOT (American, 1823-1888) was born in Vermont and taught there four years. In 1845 he became principal of the Jefferson school, Syracuse, but had leave of absence to attend the Albany normal from which he was graduated in 1848. In 1854 he became the first State agent of the State teachers association, at a salary of \$1,000. This lasted only a year, when in connection with Mr. Cruttenden he did independent institute work. In 1857 he assisted Dr. French in preparing the gazetteer of the State, and in 1860 became principal of the high school at Joliet, Ill. In 1872 he became principal of the State normal school at Warrensburg, Mo., and in 1875 of the school at Deposit, N. Y. In 1876 he removed to Ithaca and began to do institute work. He was one of the first four regularly appointed State institute conductors, continuing as long as his health permitted. He was also the author of many text-books.



JOHN H. FRENCH (American, 1824-1888), the author and institute conductor, began teaching at 17, and at 21 undertook a revision of Adams's arithmetic, eventually going to Keene, N. H., to complete it. He wrote three other books in that series. He was then principal at Clyde, N. Y., and at Newton, Conn., and in 1851 prepared a set of arithmetical charts that had large sale. He then began publishing local maps, and in 1856 undertook a map and gazetteer of the State of New York. Dr. French was also employed in the revision of Robinson's arithmetics, and he published another set of arithmetics in his own name. In 1866 he became superintendent of schools in Syracuse, resigning to become principal of the Albany model school. He was State superintendent of Vermont 1870-73, superintendent in Burlington 1873-5, and principal of the Indiana (Pa.) normal 1878-81. His last years were spent in institute instruction.



GEORGE LOOMIS FARNHAM (American, 1824-1900), author of the sentence method of teaching reading, began in 1845 to teach in the schools of Watertown, N. Y., and after graduating from the Albany normal in 1847 taught at Adams, and in 1850 became principal of a Syracuse grammar school. He resigned to take charge of a girls school in Indianapolis, but returned to Syracuse, and in 1855 became superintendent of schools. From 1863 to 1869 he was engaged in business, but was superintendent of Birmingham schools 1869-1875, and principal of a ward school 1878-80, when he became superintendent at Council Bluffs, Ia. Here he remained till elected principal of the State normal school at Peru, Neb., after retirement from which he lived in California. After giving the subject much study he introduced in 1871 the Sentence method of teaching reading, of which his manual published is the standard text-book.



ANDREW JACKSON RICKOFF (American, 1824-1899), often called the father of the American graded school, after education at the Woodward College, Cincinnati, began to teach at 17. He was for 5 years superintendent at Portsmouth, O., principal and 5 years superintendent in Cincinnati, and for 9 years conducted a private school, serving for 2 years as president of the board of education. From 1867 to 1882 he was superintendent in Cleveland, and made its schools famous, the exhibit at the Centennial Exposition being considered the most representative of American education. In 1882 he was made superintendent at Yonkers, N. Y., resigning to give his attention to his text-books. In 1855 he was president of the Ohio State association, and in 1859 of the National association. His personal qualities made him the Bayard of the American teachers of this century—our knight without fear and without reproach.



GEORGE WILLIAM CURTIS (American, 1824-1892), 13th chancellor of the University of the State of New York, was for a time a clerk in a business house, but in 1842 went with his brother to Brook Farm. In 1846 he travelled abroad, and on his return published "Nile Notes of the Hawadji" (1851) and "The Howadji in Syria" (1852). He became editor of Putnam's Magazine and financially interested. Its failure involved him in debt that was a burden most of his life. He became a popular lecturer and from 1853 until his death edited "The Easy Chair" in Harper's Monthly. He was also editor of Harper's Weekly from its establishment in 1857. He was from 1871 at the head of the movement for civil service reform. He became a regent of the University of the State of New York in 1864, and chancellor in 1890. Among his books were "Lotus Eating" (1852), "Potiphar Papers" (1853), "Prue and I" (1856), "Trumps" (1862).



JOSHUA G. FITCH (English, 1824—) was mainly self-educated, and while in University College, London, was occasional tutor in the normal department of the British and Foreign School Society. In 1852 he was made vice-principal of their normal college in the Borough Road, and in 1856 became principal. In 1863 he was made inspector of schools, in 1877 became one of the chief inspectors for the eastern counties, and subsequently became inspector of training colleges for schoolmistresses. In 1894 he was retired on half-pay, having reached the extreme limit of age permitted. Outside his official duties he was from 1865 to 1899 assistant commissioner on Lord Taunton's Schools Inquiry Commission, and served on another commission in 1899. In 1888 he was sent to visit and report on the United States. His "Lectures on Teaching", "Art of Questioning", and "Art of Securing Attention", are well known.



THOMAS HUXLEY (English, 1825-1895) studied medicine, and entering the navy became assistant-surgeon on the *Rattlesnake*. This vessel was commissioned to exploration near Australia, and Huxley devoted himself to study of the marine animals collected, writing scientific papers upon them. These were published, and when he returned to England he began arranging his accumulation of facts and observations. In 1854 he was made professor in the Royal School of Mines, and subsequently became Hunterian professor to the Royal College of Surgeons. In 1872 he was elected rector of Aberdeen University. He was a member of the London school board till 1872, and has written much on educational subjects, Vol. III. of his "Collected Essays" being entitled "Science and Education". He was naturally a strong advocate of scientific education.



ANOTHER PORTRAIT



JAMES PYLE WICKERSHAM (American, 1825-1891) began teaching at 16, and at 20 became principal of the Marietta academy, Pa. In 1854 he was elected first superintendent of schools in Lancaster county, at \$1500, the highest salary paid in the State, and in 1855 he opened a normal institute that in 1859 became the State normal school at Millersville. He was principal until 1866, when he became State superintendent, which office he held for 14 years, during which period the State made great advance. He was officially editor of the *School Journal*; he was author of two pedagogical works of wide sale, "School Economy" and "Methods of Instruction"; and his last work was a "History of Education in Pennsylvania" that will always be the standard authority. When the confederate army in 1863 entered Pennsylvania, he dismissed his school, started for the front, and served seven weeks at the head of a regiment.



SAMUEL GARDINER WILLIAMS (American, 1827-1900), the educational historian, after graduation from Hamilton in 1850 was principal at Groton 1853-56 and 1858-9, at Seneca Falls 1856-7, at Ithaca 1860-69, and of the central high school, Cleveland, Ohio, 1869-79. In 1879 he became professor of geology at Cornell, and in 1886 the first professor of the art and science of teaching there, which position he resigned in 1898. While here he wrote his "History of Modern Education", which became the standard text-book upon the subject. He was president of the New York State teachers association in 1887, and chairman of the executive committee of the University convocation in 1883. He was a frequent speaker, and his genial face and pleasant manner made him one of the best-known men in educational work. He collected a large pedagogical library, being always on the lookout for rare volumes.



JOSEPH BALDWIN (American, 1827-1899) after graduation from Bethany College in 1852 and teaching in Missouri, in 1856 spent some months in the Millersville normal, and in 1857 established the normal school at Kokomo, Ind. In 1867 he started the normal school at Kirksville, Mo., at first a private venture, but through his influence made in 1870 the first of a State system of normal schools. During the 14 years he remained here he gave more than 1000 addresses, worked in more than 150 institutes, and wrote his "School Management" (1881). From 1881 to 1891 he was president of the State normal at Huntsville, Texas, lecturing all over the State, and writing his "Elementary Psychology" (1887). In 1891 he became professor of pedagogy in the university of Texas, and in 1897 emeritus professor. Here he wrote "Psychology applied to teaching" (1892), and "School management and methods" (1897).



ABSALOM GRAVES GAINES (American, 1827-) 3d president of St. Lawrence university, after graduation from the University of Virginia in 1850, taught in the Clinton liberal institute. In 1857 he was ordained, and was pastor in Maine till 1870, when he removed to Canton, N. Y. In 1872 he became professor of moral philosophy in the St. Lawrence university, and was president 1873-88. His great mental powers, his unusual logical ability, his ripe experience, with his clear and forcible style of expression, and his noble uprightness of character are impressed upon all his students. He is eminently a wise man. Here is one of his utterances: "When I hear a young man call Socrates a knave and Aristotle a fool, it does not particularly change my opinion of Socrates and Aristotle, but it gives me a gauge by which to measure the young man." He is still professor of moral philosophy and political economy.



ALBERT G. BOYDEN (American, 1827—), 3d principal of the Bridgewater normal, after graduation from the Bridgewater normal in 1849, was assistant teacher there 1850-53, principal of the Salem English high school 1853-6, associate principal of the classical high school 1856, sub-master of the Chapman grammar school, Boston, 1856-7, first assistant in the Bridgewater normal 1857-60, and has been principal since 1860. He edited the "History and Alumni Record of the State Normal School, Bridgewater, Mass., to July, 1876", which gathered facts about more than three-fourths of all who had ever attended the school, and gave some indication of the enormous influence wrought by such an institution. The record then filled 182 close pages, and when the story of the last 25 years is added will make another and a very much larger volume of inestimable value in the history of education.



EDWARD ATKINSON (American, 1827—), reformer, was educated in private schools, and has distinguished himself as a reformer in various fields, especially banking, free trade, and cooking. In 1885 as vice-president of the American association for the advancement of science he gave an address on "Application of Science in the Production and Consumption of Food", and has invented an improved cooking-stove called the Aladdin caker. He is president of the Boston manufacturers mutual insurance company, the members of which for mutual protection have adopted rules for the economic management of their plants. Among his publications are "Our National Domain" (1879), "Cotton Manufactures of the United States" (1880), "Railroads of the United States" (1880). He has recently been prominent in the anti-expansion movement, one of his pamphlets being excluded from the mails.



EMILY HOWLAND (American, 1827—) was the daughter of a Quaker abolitionist of Sherwood, N. Y., and became so imbued with his sentiments that in 1857 she went to Washington to assist in the colored school for girls started by Myrtilla Miner. Here she remained two years. From 1863 to 1866 she taught in the Contraband camp near Arlington. In 1867 her father bought a tract of land near Heathsville at the mouth of the Potomac, and she took there a colony of Virginia negroes and started a school in a log cabin, which has since developed into a day and industrial school. This school she has since maintained, paying all the expenses. She also established about 1870 a private school of high character at Sherwood, N. Y. She has been prominent in the woman suffrage movement, aiding it not only by liberal contributions but by her gracious presence and her winning voice on important occasions.



DAVID HENRY COCHEAN (American, 1828—) after graduation from Hamilton in 1850 taught sciences in the Clinton Liberal Institute, in 1851 became principal of Fredonia Academy, in 1854 became teacher of sciences in the Albany Normal, and in 1856 became principal. While here he was sent to Europe to study the methods of the normal schools there. He was in such constant demand as a lecturer at teachers' Institutes that excessive speaking occasioned for a time entire loss of voice, from which he never fully recovered. In 1864 he was made president of the Polytechnic Institute of Brooklyn, resigning in 1899 after 35 years service. During this time the property of the Institution was increased from \$40,000 to \$340,000. Since 1872 its graduates have received college degrees and have been admitted to the post-graduate courses of Harvard and Columbia, and in 1890 it received from the regents full college powers.



CHARLES WESLEY BENNETT (American, 1828-1891) after graduation from Wesleyan in 1852 taught two years in Canada and in 1854 became a teacher in the Genesee Wesleyan seminary, of which, in 1856, he became principal. In 1859 he became associate principal in Fort Plain seminary, in 1860 superintendent of schools in Schenectady, and in 1861 principal of Lowville academy. After two years of preaching he was from 1864-66 again principal of the Genesee Wesleyan Seminary. From 1866-69 he travelled and studied in Europe. After preaching two years he became in 1871 professor of history and logic in Syracuse university, where he remained till in 1884 he accepted the chair of history in the Garrett Biblical Institute. Among his books are "Christian Archaeology", "National Education in Europe", and "History of the Philosophy of Pedagogics". He was a lovable man, but a lion in debate.



WILLIAM HUTCHISON (American, 1828-1885), principal of Lawrence academy, after graduation from Yale in 1854 and afterward from the Andover theological seminary, was for a time a missionary in Turkey, but became in 1863 principal of the Lawrence academy, Groton, Mass. In 1865 he was called to the principalship of the Norwich free academy, Conn., where he remained until his death. He was a remarkable preparatory teacher, especially in Greek. He was called "Zeus" by his pupils, and in no disrespectful spirit. He gave every energy to his calling, wrestled with bodily infirmity that every duty be faithfully performed, and wrought upon all committed to his charge a lasting impression of the dignity of Christian manhood. In college he had been upon the boat-crew, and he always encouraged athletic sports among his students. He also stimulated their powers of composition and debate, making them all-round men.



JAMES BURRILL ANGELL (American, 1829—) after graduation from Brown in 1849 and study in Europe became in 1853 professor of modern languages in Brown. In 1860 he became editor of the *Providence Journal*. In 1866 he became president of the University of Vermont, and in 1871 of the University of Michigan. In 1880-2 he was for 18 months minister to China, under commission to procure a revision of the treaties between that nation and this country. Subsequently he accepted a similar temporary mission to Turkey, in both cases accepting leave of absence from Michigan. In 1888 he was appointed one of the three commissioners to effect the treaty with Great Britain upon the fisheries dispute. In Winsor's "Narrative and Critical History of America" he prepared the article on "The Diplomacy of the United States". During his administration the University of Michigan has grown greatly.



MALCOLM MacVICAR (Scotch, 1829—), 1st principal of the Brockport normal, came to Canada with his parents in 1835, and studied in Knox college, Toronto, 1850-52. He was ordained to the ministry in 1856, and in 1858 was graduated from the university of Rochester. He went to the Brockport collegiate institute, of which in 1864 he became principal. When then the school became a State normal school he was its first principal. His health failing, he went west and in 1868 he became superintendent of schools in Leavenworth, Ks., but returned in 1869 to become its first principal of the new school at Potsdam. In 1870 he became principal of the Ypsilanti normal school and in 1881 professor of interpretation in the Toronto Baptist college. In 1888 he became first chancellor of MacMaster university, and in 1890 educational superintendent of the American Baptist home mission society. He has published "Principles of Education".



SIMON SOMERVILLE LAURIE (Scotch, 1829—), after education at Edinburgh became in 1856 visitor and examiner to the Dick bequest fund, from one of the reports on which his "Primary Instruction on relation to Education" (1867) is reprinted. In 1872 he was secretary to the Endowed schools commission, and since 1876 has been professor of the institutes and history of education at Edinburgh. He has been president of the Teachers guild of Great Britain and Ireland. His books include "Life and Educational Work of John Amos Comenius" (1881), "Mediaeval Education and Rise and Constitution of Universities" (1886), "Language and Linguistic Method in the School" (1890), "Institutes of Education" (1892), "Teachers Guild Addresses" (1892), "Historical Survey of pre-Christian Education" (1895), and many textbooks on ethics and other subjects. He has exerted wide influence over all English-speaking teachers.



D'ARCY W. THOMPSON (English, 1829—) was educated at Christ's Hospital, London, and graduated from Cambridge. For 12 years he was classical master at the Edinburgh academy, when he became professor of Greek in the Queen's college, Galway, which chair he still holds. He has been for some years fellow of the Royal university of Ireland. His "Day-Dreams of a Schoolmaster" is a charming and poetic treatment of what has proved in the hands of most authors an unromantic theme. It is largely autobiographical, dealing humorously, often tenderly, with phases of life as pupil and teacher in the big English public schools. It has made him friends wherever the English language is read, and secured for him an invitation to deliver a course of lectures before the Lowell Institute, Boston. These lectures were published in 1868 under the title of "Wayside Thoughts".

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LAURA BRIDGMAN (American, 1829-1889) at two years of age lost by fever her senses of sight, hearing, and smell. At eight she was sent to the Perkins institution for the blind, where Dr. Howe undertook her care and education. She learned to read by touch first embossed letters, and then embossed words attached to objects. When it flashed upon her that by this means she could communicate her own thoughts her being seemed changed. By metal types and a board to insert them she learned to spell the names of objects, and began to take lessons in geography, algebra, and history. She learned to write a legible hand, and received and answered letters from all parts of the world. She thought deeply on religious and other subjects, and reasoned well. Finally she became a skillful teacher of the blind and deaf and dumb. Her demonstration of the possibilities of instruction is now continue by Helen Keller.



EMERSON ELBRIDGE WHITE (American, 1829—) was born in Mantua, O., and in 1854 became principal of the Cleveland high school. From 1863 to 1866 he was State commissioner of education, and secured an institute fund and a State board of examiners. He was for a long time editor of the *Ohio Educational Monthly*. From 1876 to 1883 he was president of Purdue university, and from 1886 to 1889 superintendent of schools in Cincinnati. Since then he has been a private institute conductor and lecturer on education, deriving a larger income than any other man has ever received from this service. He was president of the Ohio State association in 1863, of the National superintendents association in 1866, of the National educational association 1872, and of the National council of education, 1884-6. He has been successful as an author of text-books, especially of arithmetics, and a "School Management".



DAVID MURRAY (American, 1830—) who formed the public school system of Japan, after graduation from Union in 1852 became a teacher in the Albany academy, and in 1857 was made principal. In 1863 he became professor of mathematics in Rutgers. In 1873 he went to Japan as superintendent of educational affairs, and spent six years in establishing a system of schools. He came back by way of China, India, and Egypt in 1871 as agent of the Japanese government to collect information and material. In 1880 he was appointed secretary of the Regents of the University of the State of New York. In 1889 he retired and has since lived in New Brunswick, N. J. He lectured on the history of education in Japan at Johns Hopkins, 1897; and has written "The Story of Japan", "History of Education in New Jersey", "The Anti-Rent Episode in New York", "Examinations, their Use and Abuse", etc.



FREDERIC WILLIAM FARRAR (English, 1831—) was born in India, but graduated from London University and Cambridge. He was from 1855 to 1871 a master at Harrow, and from 1871 to 1876 head-master of Marlborough College, serving in the mean time as select preacher at Cambridge and as honorary chaplain to the Queen. He has been prominent in temperance reform. In 1876 he became canon at Westminster Cathedral and in 1883 was made arch-deacon. In 1890 he became chaplain to the House of Commons, and in 1895 dean of Canterbury. As an author, besides many religious books, including a life of Christ that passed through 12 editions in a single year, he wrote "Eric, or little by little, a tale of Roslyn school" (1858); "Julian Home, a tale of college life" (1859); "St. Winifred's, or the world of school" (1863); "On some defects in public school education"; and edited "Essays on a liberal education".



ROBERT HERBERT QUICK (English, 1831-1891) after graduation from Cambridge spent a winter in Germany, where his attention was called to pedagogic literature, so that his "Educational Reformers" was projected when he was still quite a young man, though not published till 1868. He was connected as pupil and teacher with eleven schools, most of his teaching being as assistant-manager at Cranleigh and Harrow, and as the head of preparatory schools in Orme Square and at Gullford. He was a man of singularly lovable disposition, modest almost to shyness, abounding in pungent but stingless jest, and combining unusual intellectual vigor with the heart of a child. His "Educational Reformers" is called by Dr. Harris the most valuable history of education in English, and has made the great names of pedagogy familiar to thousands of teachers.



OTHNIEL CHARLES MARSH (American, 1831-1899), the palaeontologist, after graduation from Yale in 1850 and 1862 studied in Germany 1862-65, and in 1866 became professor of palaeontology at Yale. He devoted himself to the investigation of extinct vertebrate animals in the Rocky mountains, and in 1868 began organizing animal expeditions for explorations. More than 1,000 new species of vertebrates were discovered, and 400 of them described in published papers. In 1884 he published through the United States government the first of a series of reports with full illustrated descriptions of these discoveries. In 1878 he was president of the American Association for the advancement of science, and in 1883 became president of the National academy of science. In 1882 he became vertebrate palaeontologist of the coast survey. He left his valuable private collections to Yale.



PATRICK JOHN RYAN (Irish, 1831—), archbishop of Philadelphia, after graduation from Carlow college in 1842, came in 1853 to St. Louis, Mo., where he finished his studies at Carondelet seminary, and became professor of literature there. He became priest in 1854, vicar-general and bishop of Tricomia, and coadjutor archbishop of St. Louis in 1872, and archbishop of Philadelphia in 1884. He went to Rome in 1887 to aid in establishing a Catholic university at Washington. In 1883 he was one of the priests selected to represent at Rome the interests of the Roman Catholics of America. He was president of the third plenary council at Baltimore in 1884, and pronounced the opening address upon "The Church and her Councils". He has published "What Catholics do not Believe" (1877), and "Some of the Causes of Modern Scepticism" (1883), besides many contributions to periodicals.



JAMES ABRAM GARFIELD (American, 1831-1881) after graduation from Williams in 1856 came back to what was afterward Hiram college, where he had been pupil and teacher 1851-4, as teacher of classics, and was principal 1857-61. But he also studied law, and in 1859 was elected to the State senate. In 1861 he entered the army as colonel, and after being made major-general for bravery at Chickamauga resigned in 1863 to enter congress, where he remained till elected to the senate in 1880. In the same year he was elected president, and was assassinated July 2, 1881. He was in 1866 chairman of the committee which reported in favor of establishing a bureau of education; his speech in its behalf is published in *Barnard's Journal*, and his portrait is the frontispiece to Vol. xvii. Prof. Hinsdale's "President Garfield and Education" (1882) gives 12 of his educational speeches and addresses in congress and elsewhere.



ANDREW DIXON WHITE (American, 1832-) after graduation from Yale in 1853 travelled in Europe, where he was for several months attached to the legation in Russia, and studied at Berlin 1854-5. He was professor of history at the University of Michigan 1857-63, and State senator of New York 1863-66. He introduced the bill incorporating Cornell university, of which he was president 1866-85. In 1871 he was one of the commissioners to San Domingo, minister to Germany 1879-81 and to Russia 1892-94, and to Germany again 1896 to date. Besides "The Warfare of Science" (1876, 1895) by which he is best known as a writer, he has published "The New Education" (1868), "A Report on the Co-education of the Sexes" (1871), "Paper Money Inflation in France" (1876, 1882), "A History of the Doctrine of Comets" (1887), "Outline of Lectures on Mediæval and Modern History" (1861, 1872), "A Word from the Northwest" (1863), etc.



MRS. LOUISE POLLOCK (1832—) was born at Erfurt, Prussia, youngest daughter of Frederick Wilhelm Plessner, a Prussian officer. At 15 she was sent to Paris to complete her study of French, and on her way met George N. Pollock, of Boston, Mass., whom she married in 1849. For ten years she devoted herself to her children, who grew to number five, but in 1859 was compelled by her husband's financial reverses to attempt the support of her family, at first by translation and other literary work. In 1862 she opened in connection with Mr. Allen's English and classical school at West Newton the first kindergarten in America. In 1874 she visited Berlin to study the kindergarten system there, and upon her return removed her school to Washington, where it is now known as the National Kindergarten and Normal Training Institute, and began her lectures to mothers. She is also a successful author.



THOMAS EGLESTON (American, 1832-1900), founder of the School of Mines, after graduation from Yale in 1854 and the School of Mines in Paris in 1860, took charge of the mineralogical collection in the Smithsonian institute. He conceived the idea of a school of mines in New York, and in 1864 founded what is now the scientific department of Columbia university. He was professor of mineralogy and metallurgy until 1898, when he became professor emeritus. He wrote many works on these subjects, some of them translated into several different languages, and did mineralogical work for the United States, the Japanese, and the Russian governments. He was one of the founders of several scientific societies, and was vice-president of the New York Academy of sciences 1859-61. He left much of his estate to Trinity church for its parish schools, to teach children to earn a living.



CHARLES WILLIAM ELIOT (American, 1834—) after graduation from Harvard in 1853 taught there for ten years, and was professor of analytical chemistry in the Massachusetts Institute of Technology from 1865 to 1869. He was then elected president of Harvard, in which position he has led that university, and through its example most of the other colleges of the country, to substitute electives for the uniform courses of study that had prevailed. He has also been one of the most aggressive reformers of secondary, and to some extent of common school instruction, his phrase "shortening and enriching" the common school curriculum having become familiar as expressing an imperative necessity. He is one of the most influential members of the "Committee of Ten" of the National Association, which has directed the recent trend of educational discussion.



WILLIAM TORREY HARRIS (1835-), the most eminent of living American educators, after three years in Yale began teaching in St. Louis in 1868, and was superintendent, 1868-1890. Upon his retirement the citizens gave him a gold medal, and \$1,000 for a year of travel. His annual reports are highly valued as an important part of a pedagogical library, and many extracts have been published as separate treatises. In 1889 he became Commissioner of Education, in which office he has performed an amount and variety of valuable work that are unparalleled. At the National and other teachers' associations he has been a frequent speaker: he was joint editor with Andrew J. Rickoff of Appleton's Readers, and is editor of the International Series; and since 1887 he has edited *The Journal of Speculative Philosophy*. He is regarded as the best exponent in this country of the philosophy of Hegel.



SIMON NEWCOMB (Nova Scotian, 1835—) came to the United States in boyhood, and taught school in Maryland 1854-6. In 1857 he was employed as a computer upon the "Nautical Almanac", and in 1858 was graduated from the Lawrence school, Harvard. In 1861 he became professor of mathematics in the navy, and was assigned to duty at the observatory. He was superintendent of the "Nautical Almanac" 1877-97, and has been since 1894 professor of mathematics and astronomy at Johns Hopkins. He was secretary of the commission created by congress in 1871 for the observation of the transit of Venus. In 1874 he received the gold medal of the Royal Astronomical Society for his tables of Uranus and Neptune, in 1878 the Huyghens medal of the Dutch Society of Sciences, and in 1890 the Copley medal of the Royal Society. He has written several mathematical and astronomical text-books and works on economic subjects.



GEORGE FREDERIC BARKER (American, 1835—), after graduation from Sheffield (Yale) in 1858 was chemical assistant in the Harvard medical school (1858-61), and professor in Wheaton college (1861), and the Albany medical college (1863), where he became M.D. In 1864 he became professor in the Western University of Pennsylvania, in 1865 instructor and in 1867 professor of physiological chemistry at Yale, and in 1873 professor of physics at the University of Pennsylvania. In 1878 he was president of the American Association for the Advancement of Science. Among his books are "The Force of Nature" (1863), "The Correlation of Vital and Physical Forces" (1869), and a "Text-Book of Elementary Chemistry" (1870), which has been widely used. He was a commissioner to the Electrical Exposition of 1881, and a member of the U. S. Electrical Commission in 1884.



ORLANDO BLACKMAN (American, 1835-1899) for 25 years director of music in Chicago, came of a musical family of central New York, and at 15 led the church choir. At 16 he began teaching a district school; he attended Cazenovia seminary 1855-8, and taught the village school 1858-9. In 1859 he opened a private school at New Berlin, and in 1860 became principal at Morris, at \$300 a year. After two years he gave up the place on account of throat trouble, and became a music teacher, going in 1862 to the music school at Geneseo, where he met Lowell Mason, Geo. F. Root, and Carlo Bassini. In 1863 he went to Joliet, Ill., and through competitive test was appointed music teacher in Chicago. He was one of the sufferers of the fire of 1871 and went east, but in 1872 was called back, and remained till his death. In 1867 he published "Graded Songs for Day Schools", followed by several other series and books.



EDMUND V. DeGRAFF (American, 1835-1885) after education at Canandaigua academy began teaching at 18, becoming in 1857 principal at Middleport and in 1861 at Newark. He enlisted in the 33d New York, and when mustered out in 1863 became principal at Fairport, and afterward of No. 5, Rochester. In 1867 he went to Flushing, and in 1868 established a boys school in Rochester. He was afterward principal at Green Island, and superintendent at Paterson, N. J., but gave most of the rest of his life to conducting teachers' institutes, in which work he was the most successful man in his generation. He was called to nearly every county in New York, New Jersey, and Pennsylvania, and to Rhode Island, and several southern States. Without being scholarly or a profound thinker he had the oratorical instinct, and always sent his teachers back to their work filled with enthusiasm.



WILLIAM H. PAYNE (American, 1836-) was born in Farmington, N. Y., and had only the education of district school and academy. In 1856 he became principal of the school at Victor, in 1858 of the school at Three Rivers, Mich.; in 1864 he was called to Niles, and in 1866 to Ypsilanti seminary. In 1869 he became superintendent of schools at Adrian, where he remained 10 years. All these years he had been a tireless student, had mastered Latin, French and Italian, and had been especially interested in psychology as bearing on pedagogy. From 1864 to 1869 he had edited the *Michigan Teacher*, his plan was adopted for the State exhibit at Philadelphia, and he published "Chapters on School Supervision", "Outlines of Educational Doctrine", etc. In 1879 he became first professor of the science and art of teaching in the university of Michigan, and remained till in 1887 he was made chancellor of the university of Nashville. In 1901 he returned to the University of Michigan.



BURKE AARON HINSDALE (American, 1837-1900), one of the soundest educational thinkers of his generation, at 24 became a minister of the Campbellite church, and preached for 8 years at Solon and Cleveland. In 1868 he became professor of history in Hiram college, and was president 1870-82. He was superintendent of schools in Cleveland 1882-86, and from 1888 to his death he was professor of the art and science of teaching in the University of Michigan. He was a leading member of the National Educational association, and in 1897 president of the National Council of Education. "Schools and Studies", "Studies in Education", "Teaching the Language Arts", "The Art of Study", "How to Teach and Study History", "Jesus as a Teacher", "President Garfield and Education", "The Works of James Abram Garfield", "The Old Northwest", "The American Government" are among his books.



MRS. MARIA KRAUS-BOELTE (German, 1836—) was born in Mecklenburg, the daughter of a prominent lawyer and magistrate. She studied kindergarten methods with Froebel's widow and Dr. Lange, and began teaching in London in 1860, under Frau Bertha Ronge. In 1868 she established a kindergarten in Lübeck. In 1872 she came to America, and established a model kindergarten. In 1873 she married John Kraus, a disciple of the Pestalozzi-Diesterweg-Froebel methods, and they established a training school for kindergartners in New York city, which she continued after his death in 1896. The school has graduated more than 700 kindergartners, and it represents with remarkable fidelity the principles of Froebel. Mrs. Kraus-Boelte herself has proved an inspiration to all that is true and womanly. Their "Kindergarten Guide" in two volumes is the most complete text-book of kindergartening published.



ALBERT PRESCOTT MARBLE (American, 1836—), associate superintendent in New York city, was graduated from Colby in 1861. He had taught country schools in Maine, and he went to Wayland academy, Wis., as teacher of mathematics. He came back to Maine as principal of the Eastport high school; taught in the Edwards Place school, Stockbridge, Mass.; became principal of the Worcester academy; and was superintendent of schools in Worcester 1868-94. He was superintendent of schools in Omaha one year, and has been assistant superintendent in New York city since 1896. He has been three times president of the Massachusetts State teachers association, and was president of the N. E. A. in 1889. He was for 6 years one of the visitors of Wellesley college. He prepared a work on school heating and ventilation for the Bureau of education, and his addresses and articles are well-known for their wit and keen sense.



JOEL DORMAN STEELE (American, 1836-1886), whose text-books popularizing science had such large sale, after graduation from Syracuse university in 1858 taught in Mexico (N. Y.) academy 1858-61; served in the army 1861-2; was principal at Newark 1862-66, and of Elmira free academy 1866-72. He declined the principalship of the Fredonia normal. In 1871 he was president of the State teachers association. His address before the University convocation (1869) on the self-government of pupils described the methods he had employed in Elmira, and occasioned much comment and frequent imitation. His "Fourteen Weeks in Chemistry" (1867), was followed by similar works in other sciences, and a "Brief History of the United States" on the same plan of which 200,000 copies were sold in a single year. Altogether he published 27 works and revisions. He left \$50,000 to found a chair of theistic science at Syracuse university.



GEORGE EBERS (German, 1837-1898) while a law-student at Göttingen became acquainted with the Egyptologist Lepsius, and grew to be absorbed in the study. In 1859 he went to Berlin, and after much travel settled down in 1865 at Jena, where in 1868 he was made professor of Egyptology. In 1864 he wrote as a relaxation "The Egyptian Princess", the success of which, though it was translated into 16 languages, did not swerve him from his work as a scientist. In 1869 he visited Egypt and on his return became professor in the University of Leipzig, which post he held for twenty years. In 1876 he wrote "Uarda", again as a relaxation, followed by other novels of Egyptian and German life, so popular that he is better known by them than by his more serious work. In 1893 he was so crippled by sciatica that he removed to Munich, where he gave his mornings to work on Egypt, and his afternoons to his garden.



FRANCIS WAYLAND PARKER (American, 1837—) was born in New Hampshire, and at the opening of the civil war had received some academic education and taught district school. He enlisted as a private and after three years came out a brevet colonel, with a wound in the throat from which he still suffers. He became principal of the grammar school at Manchester, N. H.; then of the training school at Dayton, O. Then he went to Germany for three years and studied educational methods at Berlin. In 1877 he became superintendent at Quincy, Mass., where his "Quincy methods" became famous. In 1880 he was made one of the supervisors of schools of Boston. In 1883 he became principal of the Cook county normal school, resigning in 1899 to become principal of the new training school founded by Mrs. Emmons Blaine. His principal books are "Talks on Teaching", and "How to Study Geography".



HENRY R. SANFORD (American, 1837—), dean of the New York institute faculty, after graduation from Syracuse in 1861, was principal at Red Creek 1861-2, Clyde 1862-5, Ovid 1865-7, and Dansville seminary 1867-9. In 1869 he became teacher of science in the Fredonia normal, and in 1874 superintendent of schools in Middletown. In 1885 he became one of the New York board of institute instructors, of which he is now the dean. He has also conducted institutes in many other States, including Pa., Va., Del., N. C., and N. J. He was for several years secretary of the State teachers association, and was president in 1875. He founded the Council of Superintendents of the State of New York, and has always been one of its officers. He is the author of "The Word Method in Number", a series of cards for teaching rapid computation, and of "A Limited Speller". His institute work is distinguished for its practical and helpful detail.



ALBERT BARNES WATKINS (American, 1838-1891), first inspector of teachers classes in the State of New York, after graduation from Amherst in 1863 taught classics for four years at Fairfield seminary. In 1867 he organized a girls school at Westboro, Mass., but came back to Fairfield in 1868 as vice-principal. In 1870 he became principal of the Adams collegiate institute. While still here he was in 1878 elected upon the independent ticket school commissioner and re-elected in 1881. In 1882 he resigned both places to become the first inspector of teachers classes under the regents of the University of the State of New York. Upon the death of Dr. Pratt in 1884 he became assistant secretary of the regents. He prepared the history of training classes in the regents' Historical and Statistical Record. In 1882 he was president of the State teachers association. Personally he was highly esteemed in every relation of life.



EDWARD SYLVESTER MORSE (American, 1838—) after education in the Lawrence scientific school lived in Salem 1866-71, where he aided in founding the Peabody academy of sciences, of which in 1881 he became curator, and in establishing *The American Naturalist*, of which he became an editor. He was professor of comparative anatomy and zoölogy in Bowdoin 1871-74; professor of zoölogy in the Imperial university at Tokio, Japan, 1877-79. He was president of the American association for the advancement of science 1885-87. Besides text-books, he has published many scientific works, and "Early Race of Man in Japan" (1879), "Japanese Homes and their Surroundings" (1886), "Ancient and Modern Methods of Arrow Release" (1885), "On the Older Forms of Terra-cotta Roofing Tiles" (1892). He has contributed many important papers to scientific journals and the transactions of societies of natural history.



JOHN MORLEY (English, 1838—) after graduation from Oxford in 1859, though admitted to the bar chose literature as his profession. From 1867 to 1882 he edited the *Fortnightly Review*, and from 1880 to 1883 the *Pall Mall Gazette*. His articles in favor of home rule in Ireland did much to influence public opinion. In 1886 he was Irish secretary and he supported Mr. Gladstone in 1890. He also took an active part in "The Struggle for National Education", his book under that title, published in 1873, being mostly made up of articles from the *Fortnightly*. He edited the "English Men of Letters" series of biographies, and among his books are "Edmund Burke" (1867), "Critical Miscellanies" (1871) "Voltaire" (1872), "On Compromise" (1874) "Rousseau" (1876), "Diderot and the Encyclopædists" (1878), and "Richard Cobden" 1881. His political opponents say he is better fitted to write history than to make it.



LUDWIG KOTELMANN (Russian, 1839—) was the son of the conrector of the gymnasium at Demmin, studied in Russia and Germany, and took his doctorate from Jena. After attending a training-school he became in 1866 rector of the schools of Rügen, and in 1868 was called to the Pädagogium at Pusbun. Soon after he went to Leipzig as docent, and then became assistant in the physiological institute of Marburg. In 1876 he began practice at Hamburg as an ophthalmologist, and in 1877 founded the *Zeitschrift für Schulgesundheitspflege* (journal of school hygiene), which he edited for ten years, making himself thoroughly familiar with the literature and discussion in this field. His "School Hygiene," published in 1895, was at once recognized as the most important contribution ever made to this subject. An American translation appeared in 1899, especially revised by him to date, with additional matter and more illustrations.



FRANCES ELIZABETH WILLARD (American, 1839-1898) after graduation from the Northwestern female college in 1859, was preceptress of the Genesee Wesleyan seminary, president of Evanston college for ladies, and then teacher of rhetoric in Northwestern university. In 1874 she was elected corresponding secretary of the Woman's Christian temperance union, and in 1879 was made president. In 1883 she founded the World's Christian temperance union, and was president from 1887 to her death. In 1888 she became president of the American branch of the International council of women. She was also one of the first to start in 1886 the White cross movement for social purity, and she secured enactments in 12 States for the protection of women. She was in many ways the first woman of her time. Her earnestness and humor gave her remarkable power, while her lovable personal character commanded sympathy and coöperation.



MATILDA COOPER-POUCHER (American, 1839-1900) after graduation from the Albany normal in 1856 became a teacher in Oswego, and upon the organization of the normal school was made one of the critics, afterward becoming teacher of methods. She remained until 1886 at the right hand of Dr. Sheldon. She kept all the records of scholarship, attendance, and location, her work showing the celerity and accuracy that were characteristic. Her retentiveness of memory was astonishing. She could tell almost everything about any present or former student. In 1899 she married Isaac Poucher, who upon Dr. Sheldon's death succeeded to the principalship of the school. She was especially effective in her work as preceptress of the boarding school hall, carrying its cares with masterly ease, and often turning the current of a student's life at the critical moment by sympathetic and wise advice.



AARON GOVE (American, 1839—), for more than a quarter of a century superintendent of schools in Denver, was educated in the Dwight school, Boston, and after graduation from the Illinois State normal university, was in the army 1861-4, serving as adjutant of the 33d Illinois infantry, and was brevetted major. He afterward taught in Illinois, and was for a time editor of the *Illinois Schoolmaster*. Since 1874 he has been superintendent of schools in Denver. He was president of the N. E. A. in 1888, and has always been one of its most trusted leaders. Among his papers have been "City school systems" (1884), "Supply of teachers" (1894), "Tests of work" (1895), "Business side of city schools" (1896), "Education in the colonies" (1900), and "The trail of the city superintendent" (1900). His remarks in discussion have always carried weight on account of their balance-wheel tendency, for no fad ever swerves him.



THOMAS DAVIDSON (Scotch, 1840-1900) after graduation from Aberdeen in 1860 came in 1866 to Canada, and in 1887 became a teacher in the St. Louis high school, and edited *The Western*. Through Longfellow's influence he became in 1875 attached to the examination department of Harvard, and had opportunity to study archaeology in Greece, where he learned the language so as to be able to address fluently an audience of modern Greeks. He also spoke easily German, Italian, Spanish, and Norse, and did his own philosophic thinking in German. He was proficient in Hebrew and Arabic, and versed in Czech, Russian and Magyar. But he was also schooled in philosophy. Beginning, like his St. Louis companions, a Hegelian, he live to denounce him, and thought St. Thomas Aquinas had come nearest to solving the riddle of life. He published "Rosmini" (1884) and "Aristotle".



GEORGE WILLIAM ROSS (Canadian, 1841—) was educated at the normal school and became a teacher. In 1871 he was made county inspector of schools; subsequently inspector of model schools. He was graduated in law from Albert university in 1883, and became minister of education, which place he held with great acceptance until made prime minister in 1900. He was a member of parliament 1872-83, an honorary commissioner at the Colonial and Indian exposition of 1885, and has been editor of the *Strathroy Age*, of the *Huron Expositor*, and of the *Ontario Teacher*. He has written "A Report of the Schools of England and Germany", "The History of the School System of Ontario", and is well-known as a lecturer. He gave an address upon the school system of Ontario before the N. E. A. in 1891, at the International congresses of 1893, and at the N. Y. Commissioners association of 1897.



THIERRY WILLIAM PREYER (English. 1841—). after education in England, Germany and France become in 1865 privat docent at Bonn, in 1869 professor of physiology at Jena, and in 1888 privat docent at Berlin. Besides "Die Seele des Kindes" (1881, 1890), and "Die Grenzen des Empfindungsvermögens und des Wollens" (1868), widely known in America in translation as "The Soul of the Child", he has published "Ueber Empfindungen" (1867), "Elemente der reinen Empfindungslehre" (1877), "Ueber die Grenzen der Tonwahrnehmung" (1876), "Akustische Untersuchungen" (1879), "Die Erklärung des Gedankenlesens" (1885), "Die Bewegungen der Seesterne" (1887), "Elemente der allgemeinen Physiologie" (1883), "Specielle Physiologie des Embryo" (1883-84), "Ueber den Farben und Temperatursinn" (1881), "Die Kataplexie und der thierische Hypnotismus" (1878), and other books on hypnotism (1881, 1890).



GEORGE H. MARTIN (American, 1841—) after graduation from the Bridgewater normal in 1862 taught at South Danvers and Quincy, and for 18 years in the Bridgewater normal, the last 12 as vice-principal. He was then for 2 years an agent of the Massachusetts board of education, and has been since 1892 supervisor of the public schools in Boston. He has published a "Civil Government", "Hints on Teaching Civics", "A Historical Sketch of the English Language", and "Evolution of the Massachusetts School System", the last giving rise to a controversy with A. S. Draper as to the relative parts played by Massachusetts and New York in the early educational history of our country. Subsequently he published a series of papers on the early history of schools in Boston. He delivered an address on Patriotism before the N. E. A. in 1895, and has been a frequent speaker at its meetings.



JOHN FISKE (American, 1842—) after graduation from Harvard in 1863 was lecturer in philosophy there 1869-71, instructor in history 1870, and assistant librarian 1872-79; he was overseer 1879-91. He was professor of American history in Washington university, St. Louis, 1884. He has since devoted himself to lecturing both in this country and in Great Britain, and to writing, residing in Cambridge. His writings are mostly philosophical and historical. Of the former, the principal are "Outlines of Cosmic Philosophy" (1874), "The Unseen World" (1876), "Darwinism and other Essays" (1879, 1885), "Excursions in an Evolutionist" (1883), "The Destiny of Man viewed in the Light of his Origin" (1884), and "The Idea of God as Affected by Modern Knowledge" (1885). The latter include "American Political Ideas viewed from the Standpoint of Universal History" (1885), "The Critical Period of American History" (1888), etc.



TRUMAN J. BACKUS (American, 1842—), after graduation from Rochester in 1864 was professor of the English language and literature in Vassar 1867-83, and then became president of the Packer collegiate institute. He was civil service commissioner in Brooklyn for several years, president of the board of managers of the civil service system, and of the State board for the care of the insane. He has published "Outlines of English Literature", a revised edition of Shaw's "History of English Literature", and "Great English Writers". He has been a frequent speaker at the University convocation and other educational and literary meetings, and prominent in civic and benevolent work. Under his charge the Packer institute has grown greatly in numbers and in influence, having now some 50 teachers and 600 students, and exerting great influence through its graduates.



JOHN GREEN WIGHT (American, 1842—) served in the navy for a year during the civil war; after graduation from Bowdoin in 1864 taught at Lancaster, N. H., and at North Bridgton, Me.; and in 1865 came to Cooperstown, N. Y., to teach mathematics in the seminary. In 1867 he was called back to North Bridgton as principal, and in 1870 returned to Cooperstown as principal of the union school. Here he remained for 20 years, until in 1890 he was made principal of the high school at Worcester, Mass. In 1894 he became principal of the Philadelphia high school for girls, with 80 teachers and 2,500 pupils; and in 1897 of the Wadleigh high school for girls in New York city, the largest high school in the United States. In 1899 he was president of the Schoolmasters association of New York, and in 1900 of the association of colleges and secondary schools of the Middle States and Maryland. He has published "Bible Readings" (1900).



IRWIN SHEPARD (American, 1843—) was born near Syracuse, N. Y., and while attending the Ypsilanti normal in 1862 enlisted in the 17th Michigan, and was discharged for wounds in 1865; a congressional medal of honor for gallantry was awarded him in 1898. After graduation from Olivet in 1871, he was superintendent in Charles City, Ia., till 1875; principal of the high school, Winona, Minn., 1875-8; superintendent 1878-9; and president of the State normal school 1879-98, when he resigned to become the first permanent secretary of the National educational association. Of this body he became a member in 1874, and has been a member continuously since 1883. He was president of the normal department in 1889, and served as general secretary from 1893 till the office of permanent secretary was created. His courtesy and his efficiency are equally marked, and he has introduced business methods into all departments.



GABRIEL COMPAYRÉ (French, 1843—) after graduation from the École Normale Supérieure of Paris, became in 1865 professor at the Lycée of Pau, in 1868 at the Lycée of Poitiers, and in 1871 at the Lycée of Toulouse. In 1889 he became director of the Academy of Poitiers, and in 1896 rector of the University of Lyons. He has translated into French Bain's Logic, Huxley's Hume, and Locke's Thoughts on Education. His thesis on the philosophy of Hume was crowned in 1873 by the French Academy, which in 1878 gave him a prize for his "History of the Doctrines of Education in France since the 16th century." An abridgment of this, translated into English by Chancellor Payne, is widely used in the United States, and has been followed by a translation of his "Lectures on Teaching", and "Psychology applied to Education". He was a member of the Chamber of Deputies from 1881 to 1885, and secretary in 1883.



ELISHA BENJAMIN ANDREWS (American, 1844—) served in the union army and was graduated from Brown in 1870. He was for two years principal of the Connecticut Literary Institute; and after graduation from Newton was ordained in 1874 as a Baptist clergyman. In 1875 he became president of Denison University, in 1879 professor of homiletics in Newton Theological Seminary, in 1882 professor of history and political economy at Brown, in 1888 professor of political economy at Cornell, and in 1889 president of Brown University. In 1896 his advocacy of free silver led to dissatisfaction, and he resigned in 1898, to become superintendent of schools in Chicago. After a breezy service there, marked by continual conflict with the board of education for what he deemed the rights of a superintendent he resigned in 1900 to become chancellor of the University of Nebraska. He has written several published works.



CHARLES RUFUS SKINNER (American, 1844—) after education at Mexico academy and Clinton liberal institute taught in the former 2 years, was assistant postmaster at Watertown 4 years, New York agent for a mowing machine 1867-70, and editor of the Watertown Times 1870-74. He was a member of assembly 1877-81, and of congress 1881-5, where he introduced the law reducing the letter postage to 2 cents. He was deputy superintendent of public instruction 1886-92, supervisor of institutes 1892-5, and has been State superintendent since 1895. He was president of the N. E. A. in 1896. In 1890 he published "Arbor Day Manual. An aid in preparing Programmes for Arbor Day Exercises", a volume of 475 pages that has since been a standard for this purpose. He also edited "The New York Question Book" (1890), and the first two "Supplements" (1891-2) giving the questions and answers for New York teachers examinations.



ISAAC H. STOUT (American, 1846—), supervisor of teachers institutes, after a partial course in civil engineering began in 1862 to teach in district schools: was in the army 1864-5; assisted in surveying for the Kansas division of the Union Pacific railway in 1866; and was principal at Lodi, Farmer (11 years), and Dundee academy, N. Y. He was school commissioner of Seneca county 1878-84; assisted Dr. John H. French in writing "Harper's Advanced Arithmetic" 1886-7. In 1887 he became institute conductor, and so continued until in 1898 he became supervisor of teachers institutes for the State of New York. As an institute instructor he was noted for the application of shrewd common sense, and for dealing with topics outside the curriculum which yet have bearing upon the welfare of the school. He has given frequent illustrated lectures not only before institutes but before the Albany historical society.



SHERMAN WILLIAMS (American, 1846—) began teaching at 18, and in 1871 was graduated from the Albany normal. He taught at Little Neck, and in 1872 became superintendent of schools in Flushing. In 1882 he was called to organize the newly united schools of Glens Falls, where he remained till in 1898 he resigned, and was appointed upon the State board of institute instructors. For 13 years he conducted a summer school at Glens Falls, which cost him \$2,000 more than he received, but it became famous and drew eminent teachers from all over the country. He made it a special end at Glens Falls to furnish good reading to the children, and he has published in "Choice Literature" five volumes of the selections that he found most useful. He has also presented this subject at State teachers associations, and before the N. E. A. As an institute instructor he is broad-minded, and practically helpful.



HENRY H. STRAIGHT (American, 1846-1885) after graduation from Oberlin became principal of the State normal school at Peru, Neb., but owing to his interest in natural science resigned at the end of the year to become teacher in the school of that subject. Here he mapped out a scheme of education based upon science and the industries, which in 1862 he proposed in his lecture, "What we want and how to get it". He was from the first one of Agassiz's summer students at Penikese island, and in 1875 accompanied Prof. Shaler in geological study at the south. In 1875-6 he studied at Cornell and Harvard, and in 1876 became teacher of sciences in the Oswego normal. In 1883 he became a teacher in Col. Parker's Oak Park normal, but in 1885 was compelled to seek a warmer climate, and died in Pasadena, Cal. His "Aspects of Industrial Education" is a recognized authority.



JAMES LAUGHLIN HUGHES (Canadian, 1846-), after graduation from the Toronto normal in 1865 became headmaster at Frankford. In 1866 was made assistant in the model school connected with the Toronto normal, and in 1869 principal. Since 1874 he has been inspector of public schools in Toronto. He was for years secretary of the Canadian Sunday school association, and in August, 1878, taught the first lesson ever given at Chautauqua. He was the first president of the New York State kindergarten association, and when he was chairman of the elementary department of the World's Congress of 1893 his second wife, Mrs. Ada Murean Hughes, a distinguished New York teacher, was president of the kindergarten department. Among his books are "Mistakes in Teaching", "How to Secure and Retain Attention", "Froebel's Educational Laws for All Teachers", and "Dickens as an Educator".



WILLIAM REIN (German, 1847—) studied at Jena and Heidelberg, and took the degree of D.D. at Weimar. He then entered Ziller's seminar at Leipzig, and became principal teacher in the model school. After a year in a realschule, he became professor in the normal school at Weimar, from which he was promoted to be principal of the normal school at Eisenach. In 1885 he succeeded Prof. Stoy in the chair of pedagogy at Jena, which has come to be regarded as the headquarters of Herbartian teaching. He has been a voluminous writer. His "Outlines of Pedagogy" is well-known to American readers as the most available presentation of Herbart's principles, and many other works not yet translated into English have had great influence in Germany. He is now engaged upon an encyclopedia of pedagogy. He is editor of *Pädagogische Studien*, and of *Zeitschrift für Philosophie und Pädagogik*.



PATRICK FRANCIS MULLANY, BROTHER AZARIAS (Irish, 1847-1893), a strong advocate of constructive criticism, came to America in youth, and in 1862 was admitted to the Christian Brothers. He studied in London and Paris, 1877-9, and was president of Rock Hill college 1879-86. He was then called to Paris, and searched the libraries of Milan, Florence and Rome. In 1889 he came back to America, and at De La Salle Institute, New York, became teacher of literature. He read papers before the University Convocation, the New York State teachers association, and the International congress of education (1884), and was the first Catholic invited to address the Concord School of Philosophy. He published "Philosophy of Literature" (1874), "Development of Old English Thought" (1879), "Aristotle and the Christian Church" (1889), "Books and Reading" (1890), "Mary Queen of May" (1891), and "Phases of Thought and Criticism" (1892).



ANDREW S. DRAPER (American, 1848—) after graduating from Albany Academy taught for a time there and elsewhere, but soon became a lawyer and politician, and was appointed by President Arthur one of the judges of the court on the Alabama claims. In 1886, he was elected State Superintendent of Public Instruction, and in the higher phases of educational work he found a sphere surprisingly congenial. He was unprecedently successful, uniting the various interests of New York in work for common uplifting, so that the adoption of uniform examinations was only one of the several reforms consummated. In 1892 his party went out of power and he retired, but was soon elected superintendent of schools in Cleveland, under a new law that gave him authority never before granted. In 1894 he resigned to become president of the University of Illinois. He has become widely known as an educational speaker and writer.



ANOTHER PORTRAIT



SETH LOW (American, 1850—), 12th president of Columbia, after graduation from Columbia in 1870 became a partner in his father's tea-importing house. He was mayor of Brooklyn 1881-5, his grandfather having been its first mayor; and he was candidate for mayor of New York in 1897. In 1889 was elected president of Columbia, of which he had been trustee since 1881. He gave a million for the library building, in honor of his father, "a merchant who taught his son to value the things for which Columbia college stands"; in consideration of which the trustees gave 12 scholarships for the boys and 12 for the girls of Brooklyn, and 8 university scholarships. This has been supplemented by frequent later gifts. He is also president of the archaeological institution of America, and vice-president of the New York Academy of Sciences, and has conducted a Sunday bible class of men in St. George memorial church.



MELVIL DEWEY (American, 1851—), librarian of the State of New York, after graduation from Amherst in 1874 was acting librarian there till 1876, when he went to Boston and founded the American library association, the Spelling reform association, and the Metric bureau. He was librarian of Columbia 1883-8; State librarian and secretary of the regents of the University of the State of New York 1888-99; and has since been State librarian. He is at the head of a library school held in the State library, and the author of the system of decimal classification generally adopted by librarians. His work in behalf of libraries was honored by the grand prix, a special highest award, by the Paris exposition of 1900, and he has held every position of honor the librarians of America could bestow. His services of secondary education were also recognized by most complimentary resolutions upon his resignation as secretary in 1899.



W. LANCETHOR WOODSEY STRIKER (1851—). 9th president of Hamilton college, after graduation from Hamilton in 1872 and from Auburn in 1876, was for a year assistant secretary of the Y. M. C. A. in New York city, where he developed unusual skill, tact, and sympathy in dealing with young men; was pastor in Auburn 1876-8, in Ithaca 1878-83, in Holyoke, Mass., 1883-5, and in Chicago 1885-92, where he succeeded Dr. Herrick Johnson. As a preacher he was earnest, untrammelled by notes, and fertile in new views of familiar truth. In 1892 he became president of Hamilton. Besides published sermons, speeches, and addresses, he has written poems and hymns, and has compiled several hymn-books: "The Alleluia" (1890); "Church Praise Book" (1891), "Christian Chorals" (1894), "Church Song" (1899), "Choral Song" (1891). In 1888 he published "The Song of Miriam and other Hymns and Verses".



WILLIAM HARRISON MACE (American, 1852—) after graduation from the Indiana State normal in 1876 and the University of Michigan in 1883, was principal of public schools in Indiana and Iowa, and from 1885 to 1890 was professor of history in Depauw university normal school. In 1891 he became professor of history in Syracuse university, where he still remains. In 1896-7 he studied in Germany, and was graduated from Jena. In 1895 he was appointed by the regents of the University of the State of New York examiner in history for higher degrees, and he has conducted extensive courses in Chicago, New York, Philadelphia, and other large cities, and summer courses in Chautauqua, the University of North Carolina, and other places. He has published "A Working Manual of American History", "Methods in History", "Organization of Historical Material", and other works.



WILLIAM HENRY MAXWELL (Irish, 1852—), after graduation in 1872 with high honors from Queens college, Galway, became submaster in the Royal academical institution, Belfast, and took post-graduate work in Queens college. In 1874 he came to America, and not finding educational work became a reporter on the *New York Tribune* and *Herald*, and was for five years managing editor of the *Brooklyn Times*. He had also been teacher and lecturer for two years in the evening high schools, when in 1882 he was elected assistant superintendent and in 1887 superintendent of schools. This place he held till in 1898 he was elected the first superintendent of schools of the Greater New York. He has been president of the New York Council of superintendents, and of the Department of superintendence of the N. E. A. He was chairman of the Committee of 15 appointed by the N. E. A. in 1893 to report on school systems.

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THOMAS M. BALLIET (American, 1852—) was educated at Franklin and Marshall college and at Yale. After graduation from college he pursued university studies for two years. He was principal of a high school for one year, and later teacher of the classics for two years in a normal school in Pennsylvania. In 1884-5 he devoted all his time to lecturing on educational subjects in the west. In 1885 he was elected superintendent of schools at Reading, Pa., and served two years. In 1887 he was elected professor of psychology, logic, and ethics in Haverford college, but declined the appointment to accept his present position as superintendent of schools at Springfield, Mass. In 1900 he spent a year in Europe studying schools and school systems, and during his absence, Mr. G. I. Aldrich, now at Brookline, Mass., served as acting superintendent. He has read several papers before the N. E. A.



JACOB GOULD SCHURMAN (Canadian, 1854—) was born in Prince Edward Island, but studied in Europe 1875-80, residing at the universities of Edinburgh and London, and receiving upon his graduation from the latter in 1877 the University scholarship in philosophy. In 1878 he took the Hibbert travelling fellowship and spent two years in Germany. He was professor of logic in Acadia college 1880-82, of philosophy in Dalhousie college 1882-86 and in Cornell 1886-92, when he became president. In 1892 he became editor of *The Philosophical Review*, and in 1893 he aided in starting *The School Review*. He has published "Kantian Ethics and the Ethics of Evolution" (1881), "The Ethical Import of Darwinism" (1888), "Belief in God" (1890), "Agnosticism and Religion", etc. In 1899 he was made one of the commissioners to the Philippine islands. His presidency of Cornell has been aggressive, and has led to rapid growth.



CHARLES B. GILBERT (American, 1855—) after graduation from Williams in 1876 taught in a boarding school at Norwalk, Conn., 1876-8, and then went to Minnesota, and became principal successively of the high schools at Mankato and Winona, Minn., and at Beaver Dam and Oshkosh, Wis. In 1883 he became principal of the high school and in 1889 superintendent of schools at St. Paul. In 1896 he became superintendent of schools at Newark, N. J., and in 1901 at Rochester, N. Y. He was for three years lecturer on school administration at the Teachers college, Columbia university, and was president of the department of superintendence of the N. E. A., 1895-6. He is joint author with Miss Arnold of "Stepping Stones to Literature". He has read papers before the N. E. A. on "Ethics of school management" (1888), "Grammar school studies" (1894), "Correlation of studies" (1896), "Child-study" (1896).



AUGUSTUS SEISS DOWNING (American, 1856—) after graduation from Pennsylvania college in 1874 taught for three years in district schools, and in 1877 became assistant principal at Palmyra, N. Y. In 1882 he became principal at Fairport and in 1885 at Palmyra. In 1887 he became teacher of mathematics in the high school at Newark, N. J., resigning in 1890 to become one of the institute instructors of the State of New York. In 1895 he became State supervisor of institutes and training classes. In 1898 he was made principal of the new Training school for teachers organized in New York city. In 1900 he was president of the department of superintendence of the National educational association. He has been director of the N. E. A. for several years, and is a member of the National council of education. He was one of the speakers at the meeting in 1900 of the Southern educational association.



ALBERT LEONARD (American, 1857—), 1st president of the normal school system of Michigan, after graduation from Ohio university in 1888 taught in Logan and New Holland, and in Ohio university. In 1889 became principal of the high school at Dunkirk, N. Y., and in 1893 of that at Binghamton, N. Y. In 1897 he became professor of pedagogy and dean of the liberal arts college of Syracuse university, resigning in 1900 to become first president of the normal school system of Michigan. In 1887 he established the *Journal of Pedagogy*, and has since conducted it. He has been chairman of the Latin and Greek division of the Round Table of the N. E. A. His courteous manner and his warm personal interest in his students made him remarkably successful in the difficult position he held in Syracuse university. He has entered upon his work in Michigan under most favorable auspices.



WILLIAM DE WITT HYDE (American, 1858—), 7th president of Bowdoin, after graduation from Phillips-Exeter in 1875, from Harvard in 1879, and from Andover in 1882, and a year of advanced study, was for two years a clergyman at Paterson, N. J., and in 1885 was elected president of Bowdoin college. He has distinguished himself not only in the administration of college affairs, but in his frequent appearances before the public as a speaker and writer on educational topics. He has read papers before the N. E. A. in 1889 on "Promotion in the schools", and in 1892 on "Organization of American education", the latter accompanied by a diagram showing by concentric circles how education may be correlated from the nursery to the university, and insisting that college and university work should be sharply differentiated. He has published "Practical Ethics", "Practical Idealism", and "Social Theology".



NICHOLAS MURRAY BUTLER (American, 1862—) after graduation from Columbia in 1882 became university fellow in philosophy, studied in Berlin and Paris 1884-5, and became in 1885 assistant in philosophy in Columbia, in 1886 tutor, in 1889 adjunct professor, and in 1890 dean and professor of philosophy and education. In 1886 he founded the Teachers college, and was president till 1891. He was a member of the New Jersey State board of education 1887-95, president of the Paterson board of education 1892-3, and of the N. E. A. in 1895. In 1892 he founded and has since edited the *Educational Review*, and he is editor of the Great Educators series of the Teachers Professional Library, and of the Columbia Contributions to Philosophy and Education. He has also been prominent in movements for civil and political reform. Only a mind marvellously keen, alert, and unerring could perform such work so well.

INDEX

	PAGE		PAGE
a-b-c shooters.....	42	American Naturalist.....	250
Abbott, Jacob.....	168	— philosophical society.....	75
Adams, John Quincy.....	107, 106	— Quarterly Register.....	133, 144
Adriaan von Roomen.....	49	— Sunday school union..	197
Adrian of Metz.....	49	amusements.....	83
adult education.....	116, 120, 128, 173	An Experiment in Education.....	100
Æschines.....	24	analytical mechanics.....	155
Æsop.....	18	— method.....	86
Agassiz, Louis John Rudolph... 179, 189, 263		Andrews, Lorin.....	202
Agricola, Johann.....	41	Annals of Education.....	128, 157
agriculture.....	89, 113	Anderson, John.....	179
ahurus.....	17	— Martin Brewer.....	201
Airy, Sir George Biddell.....	80	Andrews, Elisha Benjamin.....	261
Albertus Magnus.....	33	Angell, James Burrill.....	230
Alcott, A. B.....	157, 170	Anthon, Charles.....	153, 206
— Wm. A.....	157, 118	Anthony, Charles H.....	196
Alcuin.....	32	Antinomians.....	41
Aldén, Joseph.....	177	Antoninus, Marcus Aurelius.....	30, 31
Aldrich, G. L.....	269	Appolonius.....	27
Alembert, Jean le Rond d'.....	81, 70, 97	Aquaviva, Claudius.....	49
Alexander.....	25	Aquinas, St. Thomas.....	33, 254
Alexandria.....	27, 210	Arabic.....	102, 163
algebra.....	18, 33, 43, 51, 71, 73, 76, 115, 174	Arago, Dominique François.....	126
Allen, Jonathan.....	219	Arbor Day Manual.....	261
— Nathaniel T.	133, 237	Archimedes.....	27, 49, 58, 73
alloys of steel.....	135	Aristides.....	21
Allston, Washington.....	136	Aristotle.....	25, 26, 53, 204, 226, 254
American association for the advance- ment of ed'n.....	160	arithmetic.....	19, 33, 49, 141, 174, 217, 221, 232, 262
— — of science.....	235, 242, 250	— local.....	51
— board of commissioners of foreign missions.....	166	Arminius, Jacobus.....	51
— ed'n society.....	114, 133, 144	Armstrong, John W.....	197
— institute of instruction.....		Arnauld, Antoine.....	60, 56
.....	141, 146, 152, 162, 171, 208	Arnold, Matthew.....	216
— Journal of Ed'n (Barnard).....		— Sara L.....	271
.....	190, 113, 124, 141, 236	— Thomas.....	149, 204, 209, 214, 216
— — (Russell).....	156	art.....	136, 209
— missionary association.....	153	Arthur, Chester Alan.....	266
		Ascham, Roger.....	47
		astronomical clock.....	53

	PAGE		PAGE
astronomy.....	18,	Bingham, Caleb.....	146
36, 50, 53, 64, 70, 88, 97, 132, 194, 206, 242		Bignon, Jerome.....	56
— physical.....	53	biology.....	78
Atkinson, Edward.....	227	Biot, Jean Baptiste.....	126
Atlantic cable.....	136	birds.....	121, 216
atmospheric pressure.....	60	Birkbeck, George.....	116, 119, 131, 160
Audubon, John James.....	121	Blackie, John Stuart.....	185
Augustine, St.....	33, 56	Blackman, Orlando.....	243
Aurelius, Marcus.....	30, 31	Blaine, Mrs. Emmons.....	248
Azarias, Brother.....	265	Blanc, Louis.....	196
		blind, education of...71, 93, 157, 152, 202, 232	
bacchants.....	42	— work by.....	71, 73, 91, 134
Bache, Alexander Dallas.....	188	blow-pipe analysis.....	108
Backus, Azel.....	111	Bodleian library.....	108
— Truman J.....	258	Bossuet, Jacques Benigne.....	61, 60
Bacon, Francis.....	52, 56	Boston Latin school.....	77
Bailey, Ebenezer.....	146	botany.....	76, 93, 189
Bain, Alexander.....	205, 260	Botany bay.....	114
Baines, Edward.....	116	Boyden, Albert G.....	227
Baldwin, James.....	193	Brahe, Tycho.....	50, 53
— Joseph.....	226	Bransiet, Matthieu.....	138
Balliet, Thomas M.....	269	Brant, Joseph.....	78
Bancroft, George.....	158	Bridgman, Laura.....	232, 162
Barker, George Frederic.....	242	British and foreign school society.....	
Barnard, Daniel Dewey.....	154100, 119, 160, 224	
— Frederick Augustus Porter.....	184, 203	Brook farm.....	223
— Henry.....	190, 113, 124, 141, 159, 236	brothers of the Christian schools.....	67
Basedow, Johann Bernard.....	83, 89, 96	Brougham, Henry, Lord.....	120, 165
Bassini, Carlo.....	243	Brown, Gould.....	115
Beck, Theodorice Romeyn.....	137, 159	— Nicholas.....	87
Bedford, Duke of.....	119	Brunswick-Lunenburg, Duke of.....	65
Beecher, Catherine.....	202	Bryant, William Cullen.....	127, 168
— Lyman.....	144	Bunsen, Robert Wilhelm.....	210
begging friars.....	33	Burgundy, Duke of.....	66
Bell, Andrew.....	100, 142	Burrowes, Thomas Henry.....	172, 140
Benedict, Erastus Cornelius.....	159	Butler, Nicholas Murray.....	273
Benedictines.....	38	Byron, Lord.....	162
Bennett, Charles Wesley.....	229		
Bentham, Jeremy.....	148	calculating machines.....	60, 71
Bentley, Richard.....	102	calculus.....	60, 65, 70, 76, 81, 86, 91
Berkeley, George.....	72	Calkins, Norman A.....	215
Bernouilli, Daniel.....	73, 76	Calvin, John.....	46, 56
— James.....	70	Campe, Joachim Heinrich.....	98
— Jean.....	70	carbonic acid.....	86
Bible.....	34, 41, 61, 69, 164	Cardano, Girolamo.....	43
— as a text-book.....	139	Caroline, Queen.....	120
— religious exercises.....	154	Carpenter, Mary.....	180, 199

	PAGE		PAGE
Carpenter, William Benjamin.....	199	colors.....	43
Carter, James G.....	145	Combe, George.....	131, 118
catastrophic geology.....	151	Comenius, John Amos.....	57
Catiline.....	28	comets.....	53, 80, 91, 194
Cauchy, Augustin Louis.....	132	Commentaries on American Law.....	104
centennial exposition.....	222	committee of 10.....	240
Central society of education.....	116	— of 15.....	269
Ceulen, Ludolf von.....	49	Common School Director.....	158
Chalmers, Thomas.....	142	— — Journal.....	146, 150
Chambord, Comte de.....	132	comparative anatomy.....	169, 199, 250
character.....	84	— philology.....	218
Charlemagne.....	32	Compayré, Gabriel.....	200
Charles I.....	55	compulsory ed'n.....	32, 90, 165
chastity.....	67	Conant, Marshall.....	161
Chautauqua.....	263, 268	Concord school of philosophy.....	157, 265
chemistry.....	91, 108, 115, 118, 134, 135	Condorcet, Jean Antoine.....	91
chess.....	51	Confessions of a Schoolmaster.....	157
Chicago exposition.....	67	Confucius.....	20
child study.....	79, 256	congressional library.....	90
China.....	20, 46	conic sections.....	60, 73
chlorine.....	135	cooking.....	152, 227
Christian brothers.....	67, 138, 265	Cooper, Myles.....	87
Christof und Elsa.....	108	— Peter.....	136
Cicero.....	28, 22	Cooper-Poucher, Matilda.....	253
circle, squaring the.....	49	Copernicus, Nicolaus.....	36, 53
circulation of the blood.....	55	corals.....	198
civil service reform.....	223	Cornelius, Elias.....	144
Clairaut, Alexis Claude.....	80	Cornell, Ezra.....	177
Clark, Samuel.....	188	corporal punishment.....	62, 152
Clarke, Edward Daniel.....	108	Cousin, Victor.....	138, 115
— Noah T.....	203	Crandall, Prudence.....	153
classics.....	34, 35, 40, 41, 131	Crates.....	26
— importance of.....	68	crèches.....	89
— methods of teaching.....	45, 47, 178	Croesus.....	18
Clinton, DeWitt.....	111	Crotona.....	19
— George.....	111	Cruttenden, David H.....	221
Cobbett, William.....	128	curriculum.....	37, 45, 240
Cochran, David Henry.....	228	Curtis, George William.....	223
Cockburn, Lord.....	92	curves.....	58, 80, 96
coeducation.....	139	Cuvier, Georges.....	109, 118
cognition.....	84	cycloid.....	60
Cogswell, Joseph G.....	158	cynics.....	26
Colburn, Dana P.....	217		
— Warren.....	141, 152	daevas.....	71
Colet, John.....	34	Daguerre, Louis Jacques Mandé.....	193
college chairs of ed'n 100, 180, 225, 231, 244, 272		d'Alembert, Jean le Rond.....	81, 70, 97
Collen, Ludolf von.....	49	Dalzell, Andrew.....	92

PAGE	PAGE
Dana, James Dwight.....198	District School Journal.....182
Dartmouth, earl of.....78	Dittmar.....124
Darwin, Charles Robert.....186, 189, 216, 262	Dix, John Adams.....154, 134, 182
Davidson, Thomas.....254	Dodge, Ebenezer.....208
Davies, Charles.....156	dogmatics.....41
Davis, Henry.....111, 163	domestic ed'n.....152
Davy, Sir Humphrey.....118, 135	dormitory system.....184
Day, Jeremiah.....115	double translation.....45, 47
— Thomas.....92	Downing, Augustus Seiss.....271
Day Dreams of a Schoolmaster.....231	Draper, Andrew S.....266, 257
deaf, education of.....80, 128, 137, 144, 184	— John William.....193
decimal classification.....287	Drisler, Henry.....206
— weights and measures.....97, 126	Drow, John.....207
deductive logic.....25	dualism, religious.....17
dephlogisticated air.....91	DuHamel, Jean Marie Coutant.....155
De Genlis, Mme de.....96	Dwight, Francis.....182
De Gerando, Baron Joseph M.....170	— Theodore William.....215
DeGraff, Esmund V.....243	— Timothy.....99, 115
De Guimps, Baron.....94	dynamics.....81
De La Salle, St. John Baptist.....67, 138	Ebers, George.....247
de l'Epée, Charles Michel, abbé.....80	eclipses.....50, 161
De Morgan, Augustus.....174	Edgeworth, Maria.....106, 92
Demosthenes.....24	— Richard Lovell.....92, 106
Denison, George Anthony.....173	editors, educational.....
Denmark, king of.....206	133, 135, 141, 144, 146, 150, 156, 157, 170,
Descartes, René.....58, 63, 72	182, 188, 190, 197, 202, 225, 232, 239, 273
Descent of Man.....186	education by the State.....25
destitute children.....	Educational Magazine.....173, 188
.....67, 69, 94, 100, 115, 119, 124, 165, 180	— Review.....273
De Viette.....49	Edwards, B. B.....144
Dewey, Melvil.....267	— Jonathan.....74, 99, 115
dialectics.....23	Egleston, Thomas.....238
dialogues.....63	Egyptians.....49, 108, 247
diamagnetism.....135	elective system.....184, 240
dice in teaching.....83	electricity.....85, 86, 135, 195
Dick bequest.....231	Eliot, Charles William.....240
Diderot, Denis.....81	Elizabeth, Queen.....47
Diesterweg, Friedrich Adolf Wilhelm.....	ellipsoids.....73, 96
.....135, 245	elliptic functions.....97
diffusion of gases.....135	elliptical orbits.....53
Dillaway, Charles Knapp.....171	Ellis, William.....160
Dilworth, Thomas.....77	Elmira reformatory.....169
Diognetus.....31	Emerson, George B.....152, 107
Diophantus.....58	— Joseph.....130, 152
discipline, methods of.....	Émile.....79, 92, 103
37, 77, 87, 127, 148, 149, 152, 157, 168,	endless punishment.....74
.....169, 170, 176, 211, 214, 245	

PAGE	PAGE
English popular education.....116	Franklin, Benjamin.....75, 72, 85, 86
Epée, Charles Michel, abbé de l'..... 80	Fraser, W.....142
Epicurus..... 26	Frazer, James.....165
equations.....132	Frederick the Great..... 71
equilibrium of fluids..... 60	Freedom of the Will..... 74
Erasmus.....35, 34, 39	Freeman, Edward Augustus.....218
Esquirol, Dr.....196	French, John H.....221, 262
Essays on a Liberal Education.....234	Froebel, Friederich.....122, 170, 200
ethics.....	— Frau.....170, 245
17, 19, 22, 23, 25, 26, 30, 63, 73, 75, 159, 208	
Euclid.....27, 97	Gaines, Absalom Graves.....226
Eudemus..... 31	Gainsborough..... 88
Eudoxus..... 27	Galen, Claudius..... 31
Euler, Leonhart.....76, 71, 73, 86	Galilei, Galileo..... 53
"Eureka"..... 27	Gall, Franz Joseph.....118
Everett, Edward.....143	Gallaudet, Thomas Hopkins.....128
evolution.....179, 186, 189, 193, 216	gallery lessons.....142
examinations.....159, 233	Galton, Samuel.....120
	games..... 83
fables..... 18	Garfield, James Abram.....236
Fairbanks, Joseph Paddock.....176	Gargantua..... 38
Faneuil, Peter..... 77	Garrick, David..... 93
Faraday, Michael.....135, 210	Gellert, Christian Furchtegott..... 82
Farel, Guillaume..... 46	Genlis, Mme de..... 96
Farmer, John.....133	geodesy..... 97
Farnham, George Loomis.....222	geography.....79, 108, 110, 136, 179, 180, 216, 221
Farrar, Frederic William.....234	geology.....91, 105, 108, 109, 110,
feeble-minded, ed'n of.....196, 213	..127, 137, 148, 151, 165, 169, 198, 235, 238
fees of Isocrates..... 22	geometry.....18, 19, 27, 33, 43, 49, 76, 86
Fellenberg, Philipp Eman'l von.....111, 113, 157	— descriptive..... 96
Fenelon, François.....66, 112	— organic..... 73
Fermat, Pierre de..... 58	George III.....88, 119
fermentation..... 70	German ed'l system..... 90
Ferrari, Luigi..... 43	Gibbon, Edward.....60, 102
Fichte, Johann Gottlieb.....103, 117, 132	Gilbert, Charles B.....271
Fisk, Wilbur.....139	Girard, Stephen..... 90
Fiske, John.....257	glaciers.....179, 210
Fitch, Joshua G.....224	Gladstone, J. H.....135
Flagg, Azariah Cutting.....134	— William Ewart.....209, 251
fluxions.....71, 73, 132	Glens Falls summer school.....262
Forster, William Edward.....209	Goethe, Johann Wolfgang von.....82, 90
founders.....34, 69, 75, 78, 89, 99, 105,	golden rule..... 20
107, 120, 136, 147, 173, 176, 177, 196, 238	Gottsched, Johann Christoph..... 82
foundlings..... 54	Gove, Aaron.....254
Fowle, William Bentley.....146	Graham, A. J.....217
Franciscans..... 38	grammar.....31, 40, 47, 48, 93, 166
Francke, August Herman.....59, 101	gravitation.....64, 80, 86, 97

PAGE	PAGE
Gray, Asa.....189	Hill, Frederic.....169
Greek.....34, 87, 68, 92, 102.	— Sir Rowland.....148, 169
..143, 153, 163, 175, 185, 204, 206, 212, 229	Hindus.....49
— importance of.....68	Hinsdale, Burke Aaron.....241, 236
— methods of teaching.....143	Hippocrates.....21
Greenleaf, Benjamin.....127	history.....155, 218, 229, 247, 257, 265, 268
Griscom, John.....115	— of ed'n.....42, 92.
Grove, William Robert.....195	..101, 120, 125, 183, 225, 234, 244, 254, 260
guessing eucouraged.....83	Hofwyl.....113
Guilford, Nathan.....126	Hogarth, William.....88
Guizot, François Pierre G.....32, 138, 155	Home, Henry (Lord Kames).....73
Guthrie, Thomas.....165	— and colonial training school.....220
Guy-Lussac.....126	Hopkins, Mark.....166
Guyot, Arnold Henry.....179	hospitals.....99
gymnastics.....83	house of refuge.....115
	How Gertrude Teaches.....94
Hall, Samuel R.....107	Howe, Julia Ward.....162
Halle, the Francke schools.....69	— Samuel Gridley.....162, 118, 232
Halley, Edmund.....80, 86	Howland, Emily.....212, 201, 228
Hamilton, Alexander.....89	Hughes, James L.....263
— Sir Wm.....131, 193	— Mrs. Ada Marcen.....263
— college.....111	— Thomas.....173
harmony of the spheres.....19	Hugo, Victor.....196
Harper, James.....149	humanists.....35, 68
Harris, William Torrey.....241, 75, 199, 234	Humboldt, Alexander von.....110
Hart, John Seely.....188	— William von.....90
Hartman.....80	Hume, David.....78, 260
Harvey, William.....55	humor of Rabelais.....38
Hasseltine, Abigail.....130	Huntington, Frederick Dan.....208
— Ann (Judson).....130	Hutchison, William.....228
Hafly, abbé.....162	Huxley, Thomas.....224, 260
Haven, Erastus O.....173	Huygens, Christian.....65, 242
Hawley, Gideon.....125	Hyde, William DeWitt.....272
Hawthorne, Nathaniel.....170	hydrochloric acid.....86
Hazelwood system.....148	hypnotism.....256
heart culture.....73, 169	
heat.....43, 86, 155, 195, 210	idealism.....23, 72, 138
Hebrew.....37, 163	idiocy.....196, 213
Hebrews.....49, 63	Illinois Schoolmaster.....254
Hegel, Georg Wilhelm F.....132, 138, 241, 254	incomes at Edinburgh.....92
Heraclianus.....31	Indians, education of.....74, 78, 89, 144
Heraclites.....26	individual freedom.....84
Herbart, Johann Friedrich.....117, 113, 264	induction.....21, 40, 52
Hermanus, Jakobus.....51	indulgencies.....37
Herschel, Caroline Lucretia.....88	infant schools.....89
— Sir William.....88	insanity.....128, 213
Hiero.....27	insects.....216

PAGE	PAGE
Isocrates.. 22	Lafayette, Gen.....162
isochronism..... 53	Lagrange, Joseph Louis.....86, 73, 97
Itard, Dr.....196	Lancaster, Joseph..119, 100, 128, 138, 142, 146
	Lange.....245
Jacotot, Joseph.....112	language.....218
Jahn.....158	— methods.....112
James I.... 55	Lansdowne, Lord.....216
Jansen, Cornelius.....56, 60, 68, 81	Laplace, Pierre Simon, Marquis de....97, 86
Janua Linguarum..... 57	LaSalle, St. John Baptist de la.....67, 138
Japan, education in.....46, 233, 245, 250	Latin.....37, 41, 50, 71
Jefferson, Thomas.....90, 75	— importance of..... 68
Jesuits.....39, 46, 49, 56, 60, 120	— methods.....47, 57
Jews..... 49	Laurie, S. S.....231, 56
Johnson, Herrick.....268	Lavater, Johann Kaspar..... 90
— Samuel.....72, 85	Lavoisier, Antoine Laurent..... 91
— (the lexicographer).....88, 93	law.....56, 104, 215
— Walter Rogers.... 143	lazarists..... 54
— William Samuel..... 85	Leavenworth, Elias.....168
Johnson's Chancery Reports.....104	lecturers.....143, 210
Johonnot, James.....221	Lectures on School Keeping.....107
Jolly, William.....131	Legendre, Adrien Marie..... 97
Jones, Bence.....135	legislators.....32,
Journal of Pedagogy.....272	90, 111, 120, 140, 154, 171, 192, 209, 236, 251
Jowett, Benjamin.....204	Leonard, Albert.....272
Judson, Adoniram.....130	— and Gertrude..... 94
— Ann Hasseltine.....130	Leibnitz, Gottfried Wilhelm..... 65
Justin, the martyr..... 31	Leonardo of Pisa..... 33
juvenile delinquents.....115	Levana.....103
	lever..... 27
Kames, Lord..... 73	Lewis, Samuel.....158
Kane's arctic expedition.....147	— Tayler.....163
Kant, Immanuel....84, 71, 103, 117, 132, 262	Leyser..... 98
Keller, Helen.....232	Liancourt, Duke of..... 60
Kent, James.....104	libraries..37, 89, 90, 128, 134, 141, 154, 167, 267
Kenyon, William C.....219	Lieber, Francis.....161
Kepler, John.....53, 50, 64	light.....43, 86, 132
Keulen, Ludolf von..... 49	Lily, William..... 34
Kindergarten ..89, 122, 170, 200, 237, 245, 263	Lincoln, Almira.....129, 140
— Messenger.....170	line of swiftest descent..... 70
Kingsbury, John.....162	Linne, Carl von (Linnaeus)..... 76
Kingsley, Charles.....210	local arithmetic..... 51
Kirkland Samuel..... 89	Locke, John.....62, 48, 64, 72, 260
Knox, John.....44, 82	logarithms..... 51
Koornhert..... 51	logic....25, 31, 37, 41, 84, 145, 174, 175, 198, 205
Kosmos.....110	logical criterion..... 26
Kotelmann, Ludwig.....252	lollards..... 34
Kraus-Boelte, Mrs. Maria.....,245	London institution.....116

	PAGE		PAGE
London mechanics institution.....	116	Massachusetts Teacher.....	192
Longfellow, Henry W.....	254	mathematics. 18, 19, 27, 33, 43, 49, 51, 58, 60,	
longitude.....	126	65, 70, 71, 73, 76, 77, 80, 81, 86, 91, 96, 97,	
Loomis, Elias.....	194	..127, 132, 141, 155, 156, 174, 200, 217, 242	
Loose Hints on Education.....	73	Maupertuis, Pierre Louis Moreau de.....	80
Lord, Asa Dearborn.....	202	Maurice, Frederick Denison.....	173, 188, 210
— John.....	129	maxima and minima.....	58
Louis XIV.....	61, 63	Maximus Planudes.....	18
— Napoleon.....	155	Max-Müller, Friedrich.....	218
— Philippe.....	96, 138	Maxwell, William Henry.....	269
Love, Samuel G.....	213	May, Samuel Joseph.....	153
Lovell, John.....	77	mechanics.....	27, 64
Low, Seth.....	267, 206	— institutions.....	116
Lowell institute.....	151, 179, 231	medical jurisprudence.....	137, 199
Loyola, Ignatius de.....	39, 46	medicine.....	21, 31, 43, 55
Lucretius.....	29	Melanchthon, Philip.....	41
Lucullus.....	30	metaphysics.....	25, 74, 138
Ludolf number.....	49	metempsychosis.....	19
lunar apogee.....	80	meteorology.....	194
Luther, Martin.....	37, 35, 41	method.....	58
Lyell, Sir Charles.....	151	— of teaching.....	45
Lyon, Mary.....	152, 130	— of variations.....	96
		metric system.....	80, 86, 97, 126
Macaulay, Thomas Babington.....	116	Michelet, Jules.....	155
McCosh, James.....	193	Michigan Teacher.....	244
McElligott, James N.....	197	Mill, James.....	175
Mace, William H.....	268	— John Stuart.....	175, 31
Maclaurin, Colin.....	73	Miller, Hugh.....	165
MacVicar, Malcolm.....	230	Milton, John.....	59, 48, 56
magnetic equator.....	110	Miner, Myrtilla.....	201, 228
magnesium.....	118	mineralogy.....	108, 124, 137, 198, 238
magnetism.....	18, 135, 194	missionaries.....	46, 74, 78, 89, 130, 144
Malpighi, Marcello.....	55	Mistakes in Teaching.....	263
Manchester and Salford scheme.....	173	Mitchell, Maria.....	206, 133
Mandeville, Prof.....	163, 219	modern languages.....	49, 218
Mann, Horace.....	147,	— methods.....	112, 130
..133, 139, 144, 150, 167, 171, 176, 187, 217		Molière (Jean Baptiste Poquelin).....	60
— Mrs.....	170	Molinos, Miguel.....	66
Manning, James.....	87	Monge, Gaspard.....	96
manual training.....	77, 83, 106, 113, 313	monism.....	60
Marble, Albert Prescott.....	245	monitorial system.....	
Marcus Aurelius.....	30, 31100, 115, 119, 128, 138, 142, 146, 156	
Marcy, William L.....	194	Montaigne, Michel Eyquem de.....	48, 56
Marsh, Othniel Charles.....	235	moon's motion.....	76, 80
Martin, Geo. H.....	257	morals, teaching of.....	66, 82, 84, 106, 166, 205
Maryland School Journal.....	220	More, Hannah.....	93, 120
Mason, Lowell.....	139, 243	— Sir Thomas.....	39

PAGE	PAGE
Morley, John.....251	Ohio Educational Monthly.....232
Morse, Edward Sylvester.....250	— Journal of Education.....202
— Jedediah.....136	Olmsted, Denison.....132
— Samuel F. B.....136, 193	omniscience.....148
Mortimer, Mary.....202	Ontario Teacher.....255
Mullany, Patrick John.....265	oratory.....22, 24, 28, 114, 143, 156, 219
Munson, J. E.....217	Orbis Pictus.....57
Murray, David.....233	orbits.....53, 70
— Lindley.....93	ordinates.....58
music.....19, 37, 41, 88, 139, 243	organization.....41, 45, 51, 101
musical intervals.....19	oriental languages.....102, 163
My Schools and Schoolmasters.....165	Origin of Species.....186
Napier, John.....51	Orleans, Duke of.....96
Napier's bones.....51	Ormuzd.....17
Napoleon Bonaparte.....96, 101	ornithology.....121
— III.....132	orphan education.....54, 61, 67,
National academy of science.....235	69, 89, 100, 115, 124, 137, 142, 160, 165, 210
— educational association.....215, 220, 222,	osteology.....31
232, 240, 241, 244, 245, 254, 255, 257,	Outlines of Pedagogy.....117
259, 261, 269, 271, 272, 273	Owen, Richard.....169
— — of Scotland.....149	oxygen discovered.....86, 91
— society.....100	Page, David Perkins.....187
natural history.....108, 110, 121, 179, 185, 213, 216, 250	palaeontology.....109, 169, 235
Nature of the Scholar.....103	Palmer, Miss.....170
nautical almanac.....127, 206, 242	Pantagruel.....38
nebular hypothesis.....97	pantheism.....63
negro, education of.....153, 201, 228	parabolas.....58
Nero.....30	parallels.....27
Newcomb, Simon.....242	Paris, University.....33
Newell, M. A.....220	Parker, Francis Wayland.....248, 263
Newton, Sir Isaac.....64, 73, 80, 97	Parmenides.....19
Nicole.....61	parochial schools.....120
Niemeyer, August Hermann.....101	parthenogenesis.....169
nitric oxide.....86	Partridge, Capt.....139
nitrous oxide.....118	Pascal, Blaise.....60
normal schools.....143, 145, 156, 158, 173, 182, 187, 188, 201	— Jacqueline.....60
North, Edward.....212	Pater, Walter.....204
— Simeon.....163	Pattison, Mark.....59
Nott, Eliphalet.....114	Paul, Jean.....103
Novum Organon.....52	— St. Vincent de.....54
obedience.....67	Pausanias.....21
Oberlin, Jean Frederic.....89	Payne, Joseph.....180
object-teaching.....94, 160, 220	— William H.....244, 260
	Peabody, Elizabeth Palmer.....170, 157, 206
	— George.....147
	Peet, Harvey Prindle.....144

	PAGE		PAGE
Pelrce, Cyrus.....	183, 206	Polycarp.....	31
pendulum.....	53	polytheism.....	78
Penikese school.....	179, 203	Pompey.....	28
penny postage.....	148	Pooler, Charles T.....	212
Pennsylvania School Journal.....	172, 188, 225	Porson, Richard.....	102
perception.....	72	Port Royal.....	56, 60, 61, 120
peripatetics.....	25	Porter, Ebenezer.....	114
Pereira.....	80	potassium.....	118
Perkins institute.....	162, 232	Potter, Alonzo.....	160, 170
Persia.....	18	Poucher, Isaac.....	253
Pestalozzi, Johann Heinrich.....	94, 68, 103, 108, 113, 117, 124, 135, 139, 141, 142, 245	— Mrs. Matilda Cooper.....	253
Phaedrus.....	17	poverty.....	67
Phelps, Mrs. Almira Lincoln.....	140, 129	Practical Education.....	106
philanthropin.....	83, 98, 113	Pratt, Daniel J.....	249
Philip of Macedon.....	22	predestination.....	51, 56
Phillippe, Frère.....	138	Prescott, William.....	145
Philosophical Review.....	270	Preyer, Thierry William.....	256
philosophy.....	17, 18, 19, 22, 23, 25, 26, 28, 29, 33, 58, 62, 63, 65, 71, 72, 78, 82, 84, 103, 117, 131, 132, 138, 175, 205, 211	Priestley, Joseph.....	86, 91
phlogiston.....	86, 91	probabilities.....	58, 60
phonography.....	199, 217	problem of the three bodies.....	80
phrenology.....	118, 131	projectiles.....	97
physical astronomy.....	53	proverbs.....	41
— education.....	48, 49, 83, 181	Provincial Letters.....	60
physics.....	41, 52, 64, 70, 75, 86, 134, 136, 193, 195, 210, 242	prudential wisdom.....	26, 84
physiognomy.....	90	Pruyn, J. V. S. L.....	194
physiology.....	76, 157, 160, 181, 199, 205, 210, 252, 256	psychology.....	211, 260
Pickering, John.....	171	Ptolemy.....	27, 49
Pierpont, John.....	118	Pythagoras.....	19, 18
pietism.....	69	quadrating parabolas.....	58
Pisa leaning tower.....	53	quadrupeds.....	121
Pitman, Benn.....	217	Quarterly Journal of the American Edu- cational Society.....	133, 144
— Isaac.....	199, 217	questioning.....	22
planetary mean motions.....	97	Quick, Robert Henry.....	234, 89
Planudes, Maximus.....	18	Quincy methods.....	245
Plato.....	23, 19, 22, 25, 26, 132, 204	Rabdogia.....	51
Platter, Thomas.....	42	ragged schools.....	165, 180
Plessner, Frederick William.....	237	Rabelais, François.....	38
Plutarch.....	19	Randall, Samuel S.....	183
Polemo.....	26	Rantoul, Robert, jr.....	171
political economy.....	84, 161, 175, 177, 227	radiant heat.....	210
politics.....	25	Ratich, Wolfgang.....	57
Pollock, Mrs. Louise.....	237	Ratio Studiorum.....	49
		Raumer, Friederich.....	124
		— Karl Georg von.....	124

PAGE	PAGE
reading, sentence method.....222	Sarmiento, Domingo Faustino.....192
realism.....138	Satan.....17
Record of a School.....157, 170	Saunderson, Nicholas.....71
reformatory ed'n.....20, 169, 176, 180, 215	Schaeffer, Nathan C.....244
regents examinations.....159	Schelling, F. W. J. von.....138
Reid, Thomas.....193	Schiller, Johann C. F. von.....82
Rein, William.....264, 117	Schimmelpennick, Mary Anne.....120
religious dualism.....17	Schleiermacher, Friedrich Ernst Danfel.....132
— instruction.....37, 73	scholasticism.....33, 40
Rensselaer polytechnic.....105	School and the Schoolmaster.....107, 152, 160
Reynolds, Sir Joshua.....88, 93	— hygiene.....245
Rheinische Blätter.....135	— law.....154, 158
Rheticus.....36	— Review.....270
rhetoric.....22, 25, 28, 37, 107, 188, 219	Schopenhauer, Arthur.....132
Rice, Victor M.....207, 183	sciences.....49, 51, 68, 111, 115, 140, 224, 245, 263
Richelleu, Cardinal.....56	Scottish free schools.....44
Richter, Johann Paul Friederich.....103	Schreber, D. G. M.....181
Rickoff, Andrew Jackson.....222, 241	Schurman, Jacob Gould.....270
Rollin, Charles.....68	secondary schools.....45, 109
— Ledru.....196	sectarian influences.....90
Ronge, Bertha.....245	— teaching.....131, 135, 160, 209
Root, George F.....243	Seguin, Edward.....196, 213
Rosmini.....254	self-activity.....48, 135, 194
Ross, George William.....255	— culture.....185
Rousseau, Jean Jacques.....79, 48, 73, 78, 92, 103, 251	— government.....75, 246
royal road to learning.....27	Seneca.....30
Royal society of Edinburgh.....73	sensatory nerves.....31
Rudolphine tables.....53	senses trained.....79
Ruskin John.....209, 173	sentence method in reading.....222
Russell, Lord John.....116	Servetus.....46
— William.....156	sesquiplicate ratio.....53
Ryan, Patrick John.....235	seven wise men.....18
Ryerson, Egerton.....167	Seigné, Mme. de.....61
Sacy, Baron de.....102	sexes of plants.....76
safety lamp.....118	Seymour, Horatio.....168
Saint Aubin, Stephanie Felicite Ducrest de (Comtesse de Genlis).....96	Shaler, Prof.....263
— Claude Henri, Comte de.....96	Sheldon, Edward Austin.....220, 253
— Cyran.....56	Shepard, Irwin.....259
— Simon.....196	Sherwin, Thomas.....141
salaries.....22, 42, 92	Sherriff, Emily A. E.....200
Salisbury, Bishop of.....173	Shuttleworth, James Kay.....167
Sanderson, Nicholas.....71	Sicard, Abbé.....128
Sanford, Henry R.....249	Silliman, Benjamin.....198
Sanskrit.....218	Silvestre, Antoine Isaac (Baron de Sacy).....102
	sines.....76
	Skinner, Charles R.....261
	Skrine, John Huntley.....214

PAGE	PAGE
slavery.....128, 134, 153, 160	Taunton, Lord.....224
Smith, Adam.....84	Taylor, Samuel Harvey.....178
Smithsonian Institution.....161, 179, 189, 194	teacher, ideal.....40
social development.....75	Teachers Advocate.....197
— science.....160	— guild.....231
Society for diffusion of useful knowl- edge.....116, 134	telegraph.....92, 136, 177, 193
Socrates.....22, 23, 226	Télémaque.....112
sodium.....118	telescopes.....53, 64, 88
solar system.....97	temperance.....128, 165, 253
sound.....86	Thales.....18
spectrum analysis.....193	Thayer, Gideon F.....141
spelling reform.....267	The School and the Schoolmaster.107, 152, 160
Spencer, Herbert.....211, 84	The Western.....254
Spinoza, Baruch.....63	Theaetetus.....27
spiritualism.....216	Theatre of Education.....696
Spurzheim, Kaspar.....118	Themistocles.....21
squaring the circle.....49	theology.17, 20, 33, 34, 35, 37, 39, 41, 44, 46, 49, 51, 56, 60, 61, 69, 74, 84, 149, 164, 227
Stagirite, the.....25	thermometer.....85
Steele, Joel Dorman.....245	Theory and Practice of Teaching.....187
Stevens, Thaddeus.....140	Thierry, Amédée Simon Dominique.....155
Stiles, Ezra.....85	things before words.....48
Stilpo.....26	Thompson, D'Arcy W.....231
stoics.....26, 30, 31	thrift.....75
Stout, Isaac H.....262	Thring, Edward.....214
Stow, David.....142	Thyandegea.....78
Stoy, Karl V.....264	Tillinghast, Nicholas.....170
Stowe, Calvin Ellis.....163	Tobler, Johann Georg.....108
— Harriet Beecher.....163, 201	Torrey, Jesse, jr.....128
Sturm, Johann.....45	— John.....189
Straight, Henry H.....263	training schools.....142, 154
strontium.....118	transubstantiation.....34
Stryker, Melancthon Woolsey.....268	trigonometry.....33
subjection to authority.....84	Trimmer, Mrs. Sarah Kirby.....88
substance.....60	Truro, Lord.....169
sufficient reason.....132	Tuckerman, Joseph.....180
suicides.....24, 29, 91, 165	Turner, Joseph Mallord William.....209
Sumner, Charles.....192	Tweed-Dale, Mr.....146
superimposure.....27	Tyndall, John.....210, 135
sweetness and light.....216	
Swiss schools.....46	unconditioned.....131
Sylvester, James Joseph.....200	Unconscious Tuition.....208
	undulatory theory.....132
tangents.....58	uniform examinations.....266
Tappan, Henry Phillip.....172	university reform.....185
Tartaglia, Nicolo.....43	Upson, Anson Judd.....219

PAGE	PAGE
Uranus discovered..... 88	White, Emerson Elbridge. 232
Van Rensselaer, Stephen..... 105	white cross movement..... 253
variations, method of..... 86	Wickersham, James Pyle 225
velocity of falling bodies..... 53	Wight, John Green..... 258
Vermont School Journal..... 176	Wilbur, Harvey Backus ... 213, 196
vernacular instruction..... 120	Wilderspin, Samuel..... 142
Verplanck, Gulian Crommelin..... 127	Willard, Emma..... 129, 140
Verres... 28	— Frances E.... 253
Verulam, Baron..... 52	Williams, Samuel Gardiner..... 225
Verus..... 31	— Sherman..... 262
Viète..... 49	— secular school..... 131
Vives, Giovanni Ludovico..... 89 ⁴⁰	Wilson, Marcus. 198, 203
vocal music..... 139	Wines, Enoch Cobb..... 176, 215
Vocation of the Scholar..... 103	Winsor, Justin ... 230
volition..... 72	Witherspoon, John..... 82
Voltaire, François Marie Arouet..... 60	Wolff, Christian. 71
Von Raumer, Friedrich..... 124	women, ed'n of. . 35, 40, 79, 93, 124, 128, 129,
— Karl Georg..... 124	130, 134, 139, 146, 152, 162, 184, 200, 202
Wadsworth, James..... 107, 152, 160	Woodbridge, W. C. 139, 157
Wallace, Alfred Russel..... 216	Woolsey, Theodore Dwight..... 161
Wallenstein, Duke of..... 53	Woolworth, Samuel Buell..... 159
Washington, George..... 128	Worcester, Joseph E..... 171
water screw..... 27	word method in number 249
Watkins, Albert Barnes..... 249	Wyclif, John. 34
waves, theory of..... 71, 73, 132	Xavier, St. Francis..... 46
Wayland, Francis..... 151, 130	Xenophon.. . . . 22
Wealth of Nations..... 84	Zeitschrift für Schulgesundheitspflege.. 252
Webster, Daniel..... 148, 171	— — — Philosophie..... 264
— Noah..... 77, 126	Zeno..... 26
Wehrli..... 113	Ziller..... 264
Wheelock, Eleazar..... 78, 89	zoölogy.... 121, 155, 180, 186, 198, 216, 223, 250
Whewell, William..... 148	Zoroaster..... 17
White, Andrew Dixon..... 236	

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